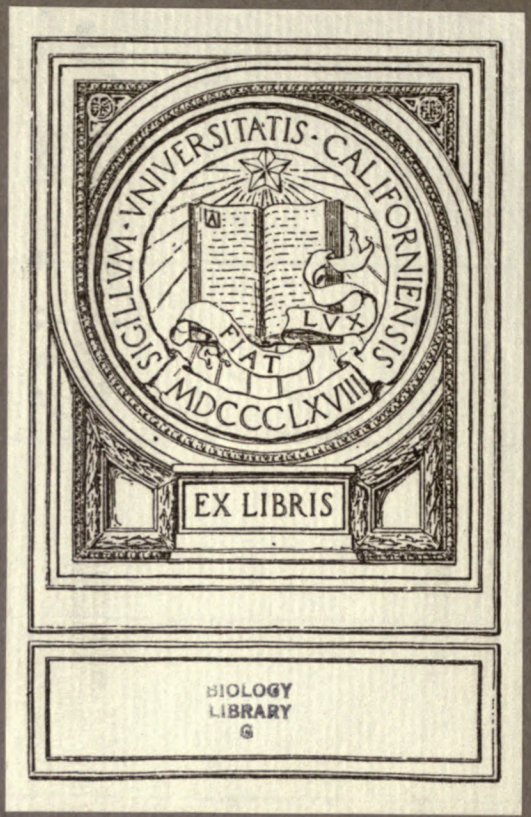


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AMONG BRITISH BIRDS IN THEIR
NESTING HAUNTS

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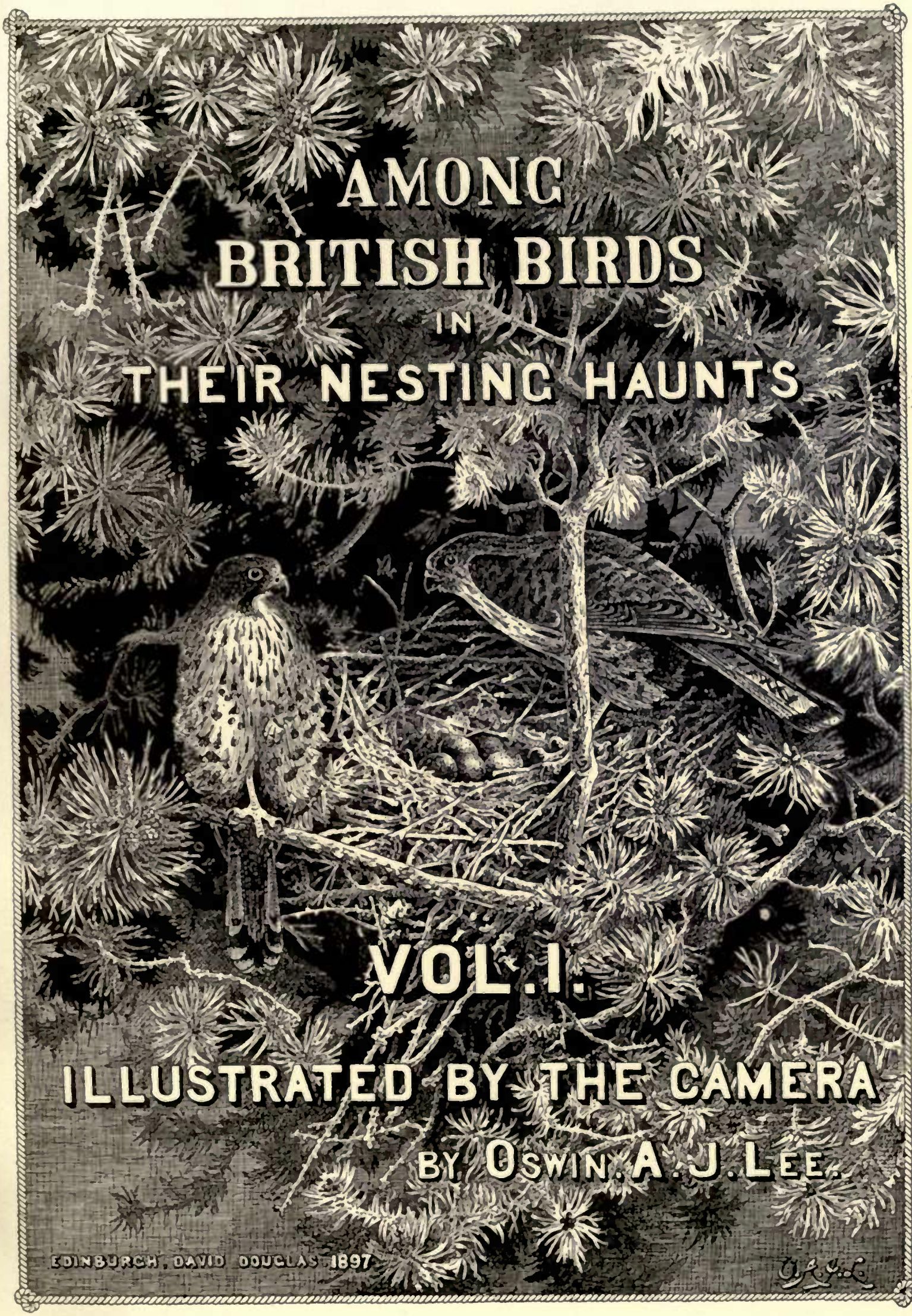
FOR

DAVID DOUGLAS

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AMONG
BRITISH BIRDS
IN
THEIR NESTING HAUNTS
VOL. I.
ILLUSTRATED BY THE CAMERA
BY OSWIN A. J. LEE.
EDINBURGH. DAVID DOUGLAS 1897

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AMONG BRITISH BIRDS
IN THEIR NESTING HAUNTS
ILLUSTRATED BY THE CAMERA

BY

OSWIN. A. J. LEE

PART I.

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CORMORANT.	1 "
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EDINBURGH. DAVID DOUGLAS.

O.A.J.LEE.

INTRODUCTION

TO many of us the nesting season is perhaps the most interesting phase of Bird-life, partly because our feathered friends throw off at that season a great deal of their natural shyness and timidity, affording us better opportunities of observing their habits, and partly because Nature is then at her freshest, and awakens in us a keener appreciation of the marvellous works of the Creator.

Some years ago I determined to collect, if possible, a complete series of Photographs, which would possess the accuracy of a scientific work on the nesting habits of birds, and yet be sufficiently attractive for the ordinary lover of birds.

It is with this idea that I have ventured to publish these Photographs, with short descriptions of the habits of the birds at the nests, the finding of them, the materials of which they are formed, and the methods employed in getting faithful photographs of those more difficult of access, some of which—*e.g.* the Heron on its nest—were only secured after hours of anxious watching and much patience.

It is no easy matter to photograph some of our birds' nests so as to combine a pleasing effect with strict accuracy, some of the tree-breeding species being exceptionally unapproachable.

I have seen many photographs of birds' nests which have been so manipulated, under the plea of artistic effect, as to lose all that subtle touch which the feathered architect gives to its work. This is not the way to give a faithful picture of a bird's nest. One might just as well stick a stuffed bird on to a growing branch, and, having photographed it, call it a study from Nature.

All the nests illustrated in this work have been most carefully chosen from many specimens examined, and have been, without exception, photographed *in situ*, and the nest and eggs, as well as the immediate surroundings, have been left untouched.

The nomenclature adopted is from the *List of British Birds*, by Howard Saunders, F.L.S., F.Z.S., etc. etc. (*July* 1892).

OSWIN A. J. LEE.

EDINBURGH, *Oct.* 1896.

EIDER DUCK

Somateria mollissima

THE Eider Duck is an Atlantic species and breeds on most of the islands off the west coast of Scotland, including the Hebrides and St. Kilda, and also on the Orkneys and Shetlands; on the east coast it breeds sparingly in the Firths of Forth and Tay, and in England on the Farne Islands; it is, however, only a rare visitor to the English coast, south of Yorkshire, and to Ireland, where it sometimes strays during the winter.

The Eider does not, as a rule, wander far from its breeding haunts, but may generally be seen frequenting the islands or coasts where it breeds, even during the storms of winter. It is chiefly a dweller on the sea, and does not often leave the salt water; on the west coast, however, it may be seen on some of the fresh-water lochs, both on the islands and near the coast, and in such localities it flies across the land to and from the sea. In winter the Eiders collect into large flocks and become extremely wary; indeed, it is almost impossible to get within gunshot of them except by most careful stalking. They may generally be seen feeding on the coast, swimming just outside the breakers, sometimes diving through them and searching for the small crustaceans on which they feed. They are very great adepts at diving, and can remain a long time under water, obtaining most of their food in this way. They float very lightly on the surface, and swim well, even in rough water, rising at once in the air when disturbed, but they are not so quick in taking wing when the water is calm, usually splashing along the top for some distance before rising. The Eider is very seldom seen with other ducks, except its rare and beautiful ally the King Eider; I have repeatedly seen it drive off small bunches of Widgeon, when the latter had presumed to intrude on its feeding-grounds.

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The food of the Eider consists entirely of small shell-fish, sea-insects, and young crustaceans, and it is an amusing sight to watch an Eider struggling with a fair-sized crab, which it endeavours to swallow whole.

During the month of March pairing begins, and the flocks of Eider Ducks break up. Nest-building commences in May, the birds preferring low, uninhabited islands covered with sea-campion and coarse herbage; but they will nest often far from water, or among precipitous rocks on grass-covered ledges, or even among old ruins, as on the Bass Rock, where I saw an Eider's nest not twelve feet from a Peregrine Falcon's abode.

The nest of the Eider is a pretty substantial collection of seaweed, bladder-campion or dead grass, the down being added when the full complement of eggs is nearly reached. On the Farne Islands, where a considerable number of these birds breed, the nests were for preference hidden among the masses of sea-campion, nettle, and sorrel, with which several of the islands are covered, but I also saw many nests among the broken rocks, in crevices, among dead seaweed, or even on the bare stones on the sea-shore among the drift-wood above high-water mark. On the west coast of Scotland, where I have repeatedly seen the nests of the Eider on the moors nearly a mile from water, the nest is largely composed of heather, only a little dry grass or moss being added besides the down; in sandy places the Eider often does not trouble about a nest, but lays her eggs in a hollow in the ground well lined with down.

The eggs of the Eider vary in number from five to eight, and are greyish green in colour, some specimens being much yellower in colour than others; they vary considerably in size, from 3·4 to 2·8 inches in length, and from 2 to 1·8 inches in breadth.

The down is brownish grey, with obscure pale centres, the down of one bird being sometimes slightly browner than that of another.

Young in down are uniform dark brown on the upper parts, with a broad pale brown streak over each eye, and light brown under parts. They are often killed by the Black-backed Gulls, though bravely defended by the mother. When alarmed they make for the open sea at once, diving boldly through the breaking waves, and are helped by the old Eider, who takes them on her back as they get tired.

I was returning to my boat one day from the top of the Bass Rock, where I had been taking photographs of the Gannets, and was making a détour round part of the ruins to get a snap-shot at some Puffins, when I came suddenly upon an old Eider with four ducklings evidently not long

hatched. The place was somewhat steep and covered with sea-campion down to within fifteen feet of the water, ending in that height of sheer rock. The old duck led the young ones straight for the water, and, feeling rather curious to see how she would negotiate the drop, I followed. On reaching the edge of the rock the young birds hung back, but the old duck without the slightest hesitation shoved them over, one after the other, with her bill, and flew down after them. By the time I reached the edge and looked over, she was swimming out to sea with the four ducklings close behind her, apparently none the worse.



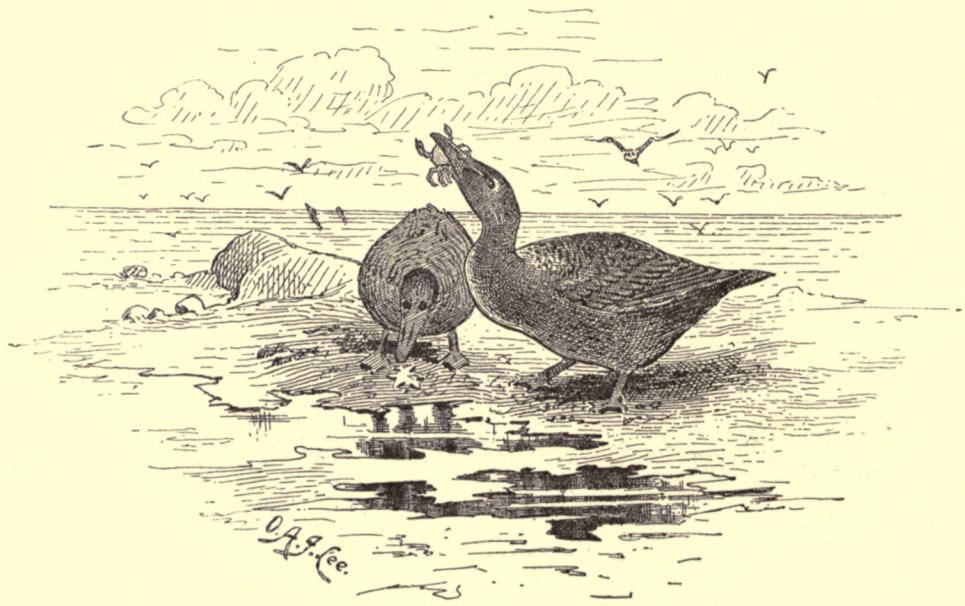


PLATE I

EIDER DUCK. *Somateria mollissima*

June 4th, 1895.—The Eider Duck's nest depicted in this Plate was one of nineteen I examined on the Farne Islands. The bird was sitting in a very picturesque attitude with her head turned round on her back when I first saw her, but when the camera was slowly got into position and the focussing-cloth appeared, she flattened herself out on the ground and lay absolutely motionless, allowing the flies to run about on her bill without heeding them.

Her nest was merely a depression in the sand, in a hollow among the nettles, sea-campion, and thistles, and was lined almost entirely by the mass of down round the eggs, only a few dead nettle stalks and bits of dried seaweed being added. It contained five eggs, which were all chipped and hatched out next day.

In photographing sitting birds — at any rate, those whose nests are on the ground — I have always noticed that they can be approached within a very short distance if two or three persons come up from different sides at the same time, as the bird does not seem to know which way to leave the nest; if, however, only one approaches, she very often makes off at once in the opposite direction. Great care, however, must be taken not to include the feet of the person opposite, as they do not add to the charm of the picture.

On the Inner Wide-opens at the Farnes we saw no less than six Eiders sitting on their nests close to the large colony of Sandwich Terns. These nests were all mere hollows in the masses of dead dry seaweed stalks cast up by storms, and looking like piles of mummified snakes, and the eggs were covered with masses of down. They were all within a few feet of one another, two of them actually touching each other.



EIDER DUCK. *Somateria mollissima.* *Plate I*

¼ NATURAL SIZE.

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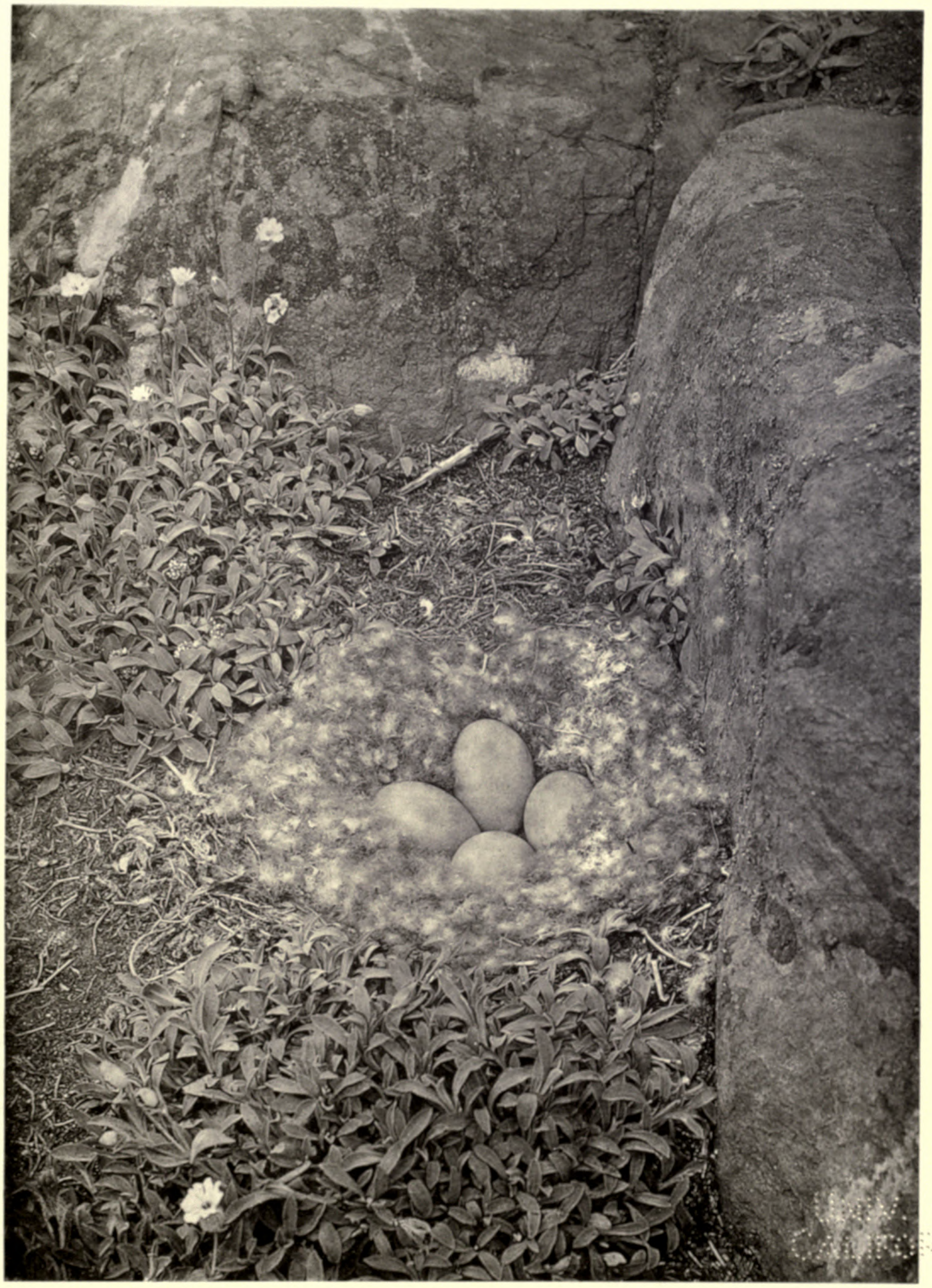
PLATE II

EIDER DUCK. *Somateria mollissima*

June 4th, 1895.—This Plate was taken from a nest on the Outer Wide-open Farne Islands. It was built on a ledge of turf covered with sea-campion, among the rocks close to the sea, but considerably above it; the Eider left the nest as we came up and swam about in the sea quite close, watching us.

After photographing the nest I withdrew about thirty yards from it and sat down to change my plates. I had hardly been two minutes at work when a Lesser Black-backed Gull pounced down on the nest, and, seizing an egg, attempted to fly off with it. The brute had hardly got twenty yards away, when the egg dropped and went to pieces on a rock, so it simply returned to the nest for another, which it bore off successfully. I was powerless to do anything, as my arms were both buried in my changing-bag, at work with my slides, and shouting had not the slightest effect. I had taken the precaution of covering up the eggs with the down when I had finished photographing the nest, but even this availed nothing. The Black-backed Gulls destroyed great numbers of the Eiders' nests, often before our eyes, breaking and eating the eggs and scattering the down all over the place.

On two occasions on the Farne Islands I have seen two Eider Ducks sitting side by side on what was practically the same nest, but on neither occasion was I able to procure a photograph of the fond pair, as they made off before I could get close enough to them.



EIDER DUCK. *Somateria mollissima.*

Plate II.

¼ NATURAL SIZE.

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CORMORANT

Phalacrocorax carbo

THE Cormorant is a common resident throughout Great Britain, and breeds wherever a suitable locality is to be found; most of its breeding-stations are on rocky islands or cliffs on the coast, but it has several well-known haunts far inland, where it nests both on rocks and on trees. In winter it may be seen on almost any part of our coasts, however low-lying, and in many fresh-water lochs.

The Cormorant is, as a rule, most partial to the sea, but may generally be found wherever fish are to be obtained. It is most at home on the water, where it swims and dives with great ease, using its wings as well under water as in the air, and chasing its finny prey with great speed. Its flight is rapid, like that of a duck, and it progresses through the air at a great pace, its long neck stretched out and its feet extended beneath its tail. On land it is an ungainly bird, and walks badly: it may often be seen sitting on some pinnacle of rock, gorged with fish and half asleep, too wary, however, to allow itself to be approached within gunshot.

In the beginning of April the Cormorants return to their breeding haunts, and begin to repair the damage done to their nests by the storms of winter; but eggs are seldom to be found before the beginning of May.

At the Farne Islands the Cormorants breed all by themselves on a reef of rocks some distance to the north of the main group of islands. During last spring (1895) a heavy sea at high tide destroyed most of the nests just as the birds were beginning to lay, and they migrated to one of the other islands well out of reach of the waves. On a former visit, the birds allowed us to land on the island without moving, but began to get uneasy as we got within eighty yards of them; so I hastily secured some photographs of them as they sat on their nests, with their long necks stretched up in the air, uttering a chorus of

harsh croaks. As we approached they took wing, and after flying round us once or twice at a respectful distance, they retired to the sea and alighted some distance off. The whole of the rocks in the immediate vicinity of the nests were covered, fully an inch deep, with a yellowish-white, evil-smelling coat of rotten fish, and droppings of the birds, and in many of the nests we found the remains of fair-sized fish, half rotten for preference, and generally headless. I counted fifty-three nests—huge heaps of seaweed, some of them over two feet high—one especially large one was placed on the highest pinnacle of the island, and must have contained two wheelbarrow-loads of seaweed. The number of eggs in the nests varied from two to five, though four seemed to be the most common number.

Having contented myself with the five eggs out of the large nest before mentioned, and taken several photographs and sketches, I sat down some way from the nests to write down some notes and change my plates. The Cormorants at once returned. I had just got all my plates changed, and was writing notes, when I heard a most fearful din arise among the Cormorants. On looking at them through my glasses, I saw that the owner of the big nest was being attacked by several of her neighbours. During the struggle I saw her eject an egg from her pouch, and on going up to the spot to verify the fact, found the broken egg and two others in the nest which I had emptied not five minutes before! The wretched bird was evidently receiving punishment for theft.

The nest of the Cormorant is usually a large bulky structure of seaweed, and is added to from year to year; the eggs are generally laid in a slight hollow among the bare seaweed, but occasionally a few pieces of sea-campion or grass are added as a sort of lining. Inland, where seaweed is not obtainable, the nests are made of sticks, reeds, and water plants, or bits of heather or turf, and slightly lined with a few pieces of green sedge or grass.

The eggs laid vary in number from three to five, very rarely six. The outside of the shell is entirely covered with a white chalky substance, though the greenish colour of the shell generally shows through in patches; when held up to the light they are emerald green inside. They vary in length from 2·9 to 2·4 inches, and in breadth from 1·7 to 1·5 inches. Large eggs of the Cormorant are not easily confused with small eggs of the Gannet, on account of the much greater breadth of the latter; small eggs of the Cormorant are, however, absolutely indistinguishable from large eggs of the Shag.

Young in down are sooty black; they have dark brown legs, and feet with paler webs, and a flesh-coloured bill.

PLATE I

CORMORANT. *Phalacrocorax carbo*

June 10th, 1893.—This Plate is from a general view of the colony on Cormorant Island off the Farnes. The birds have been established here for many years, and have gradually increased in number, though the nests have been washed away by heavy seas during the breeding season on two occasions.

When I visited the colony in 1892 there were forty-five nests containing eggs, and in 1893 I counted fifty-three nests. The birds are much shyer here than I have ever seen them at other stations on the west coast of Scotland, possibly because they are more frequently disturbed. They left their nests when we were some eighty yards off, and retired to the sea some distance away. All the time we were at the nests, small parties of them frequently flew round to watch our movements.

We noticed that the white filaments on the head and neck and the white plumes on the thigh were still visible, though many of the birds had apparently cast the white filaments on the head and neck, and had only the white plumes on the thigh remaining.

The period of incubation lasts from twenty-six to twenty-eight days, both birds taking their share of that duty, during the performance of which the sitting bird is fed by its mate, often refusing the food brought, which is then allowed to lie about the nest till it decomposes and makes the vicinity of the nest anything but sweet. I noticed with the aid of a glass that the male performed the task of collecting food for the young birds, who pecked the half-digested fish from his mouth, or from the edge of the nest where he sometimes disgorged it. After the young birds have been hatched for some time the entire sides of the nest are coated with a decomposing mass of fish, and covered with thousands of flies.



CORMORANT. *Phalacrocorax carbo.*

½ NATURAL SIZE.

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PEREGRINE FALCON

Falco peregrinus

THE Peregrine Falcon is still undoubtedly the commonest of our larger birds of prey, in spite of the war waged against it by gamekeepers and collectors. It still breeds in a few favoured localities in England, chiefly on the rock-girt southern and western sea-coasts, though there are a few well-known inland sites in the Northern Counties. It is still, however, a common bird on the wild west coast of Scotland, where most of the huge cliff faces are tenanted yearly by a pair. In Ireland also it breeds in most suitable localities. The Peregrines which breed in our islands are resident all the year round, but their numbers are increased in spring and autumn by the migratory birds, which remain some little time with us to rest. These migrants probably follow the flocks of waders and ducks to and from their breeding haunts in more northern latitudes.

The favourite haunts of the Peregrine are the wild open moors and mountain-sides, and the rocky cliffs on the sea-coast which abound with sea-fowl of various kinds. There is no slyness or skulking about the Peregrine's mode of hunting; his proceedings are characterised by an extraordinary amount of boldness and dash. He fairly flies down his quarry, and rising high in the air stoops at it with a marvellous precision, seldom failing to kill it instantaneously. His wing-power is magnificent, and he can with ease overtake and kill the rock pigeons, whose swiftness of flight surpasses that of almost any bird. The higher he rises, the more certain is his stoop, the death-blow being almost invariably given by his terrible hind-claw.

The Peregrine has been condemned by game-preservers in general, for his wanton destruction of birds; he has an unfortunate habit of striking down grouse, partridges, etc., almost under the keeper's nose, and flying off quite

unconcernedly without troubling to pick them up. I remember once watching a Tiercel Peregrine from the shelter of a wood. He suddenly rose high in the air and stooped at the front bird of a small covey of grouse, killing it dead. It fell among some long heather, and after taking a sweep round near the place he flew off and killed a small leveret some distance away, which he carried to a rock on the other side of the glen. On picking up the grouse I found that its skull was split open from the base to the bill as cleanly as if it had been done with a knife. I have frequently seen Falcons kill their prey and leave it, but have generally observed that on these occasions the birds fell in long heather or rank vegetation, and that they were struck very near the ground; probably also the Falcon was not very hungry, and so did not trouble to alight and pick up his game.

The Peregrine Falcon kills birds even larger than himself. On such occasions, of course, he cannot carry away his prey, but has to devour it on the spot. Coming over the crags from Loch Skene, in Dumfriesshire, I saw a Heron attacked by a Peregrine; the former instantly endeavoured to keep above the Falcon, and both birds were at an immense height before the Peregrine stooped and struck his prey. The Heron immediately collapsed and fell straight down, the Falcon letting him get within a hundred feet of the loch before he shot down like a thunderbolt and struck again; this time he kept his grip and guided his prey to a large rock on the shore, where I afterwards saw him tearing it to pieces at his leisure.

The Peregrine is a fairly early breeder, and eggs may be taken by the middle of April. On some parts of the west coast, however, they are generally rather later, probably owing to their dependence on the sea-fowl for food for their young. They pair for life, and generally frequent the same district year after year, though the nest is not always built in the same situation; each pair seems to have two or three favourite spots, which they use in turn. The nest is almost invariably placed on some inaccessible part of the cliff chosen; if it be in a glen, the side which is not exposed to the sun is usually taken, and an overhanging rock is much preferred, for the shelter which it gives, but a wide outlook is the most indispensable adjunct. Sometimes the Falcon's nest is quite accessible. This is often the case on small uninhabited islands, and I have come across several nests to which one could walk without any climbing at all, the one on the Bass Rock being perhaps the best instance of these. The eggs there were placed on the bare ground at the foot of the old buildings, among a few small tufts of bladder-campion. I revisited this nest when the young were nearly full-fledged, and took the following inventory of the larder

at the nest: six Puffins, one Guillemot, four Thrushes, a Blackbird and a Kittiwake. Most of these birds were untouched, or only half plucked, but the whole place was strewn with bones and wings, chiefly those of the Puffin, which seems to be the Peregrine's favourite food in seaside districts.

The nest is usually a poor structure, often consisting only of a few small sticks or scraps of vegetation, the eggs being sometimes laid on the bare ledge, without even these scanty preparations. I have never come across a Peregrine's nest which had signs of any trouble having been taken in the building of it.

The eggs vary in number from two to four; sometimes, but very rarely, as many as five are laid. The ground colour is pale yellowish buff, but it is not very often exposed, as the entire surface is usually covered with rich red-brown or brick-red markings. Some specimens when quite fresh are suffused with a beautiful purplish bloom, but this very soon fades after they have been blown or are slightly incubated. The eggs vary much in shape as well as in size, even in the same clutch, some being almost round, while others are more oval in shape. They vary from 2·20 to 1·92 inches in length, and from 1·80 to 1·50 inches in breadth.

The young, when hatched, are covered with a dirty white down, which remains till they are nearly fledged. They are most carefully tended by their parents, whose anxious chattering cry is not often forgotten when once heard. The old birds cater for them for some time after they can fly. At first the prey is carefully stripped of its fur or feathers, but when the young begin to get fledged they are left to do this for themselves. By the time that they leave the nest the ledge is usually a mass of bones, feet, wing-feathers, and pellets, the refuse of their food.




O. A. J. Lee.

PLATE I

PEREGRINE FALCON. *Falco peregrinus*

May 21*st*, 1896.—This Plate was taken from a nest on Hall's Craig, Lochbuie, Isle of Mull. The nest was in a very nasty place to get at, and the keeper assured me that it could not be reached, as he had tried it himself and could not manage it. I was determined to try it, however, as he said he was quite certain it contained eggs. Accordingly we walked round to the base of the cliff and examined our ground from below. To the left of the nest a sort of shallow gully filled with scrub ran up the almost perpendicular face of the cliff, ending in a little grassy ledge which dwindled to nothing at the edge of the ridge of rock, which divided our gully from the one in which was the cave containing the nest. We could see quite well that it was a very ticklish corner to get round, and it was this corner that had foiled the keeper.

We started off and climbed up the gully. It was desperately hard work, as in many places it was quite perpendicular, with only the scrub to hold on by, and there were a great many loose blocks of rock. However, we got up at last to the ledge, rather hot, but with the camera all safe. After a moment's rest I examined the end of the ledge and the ridge. It certainly was a very nasty corner if one looked down, but that was not at all necessary. I got one leg round cautiously, and after a wide reach and a short struggle I was on the ledge beside the nest, or rather just above it. I then reached round and took my camera from the keeper, who held it as far round as he could from his side of the ridge. After that all was plain sailing, except that I could not get farther away from the nest than four feet, and that only by standing on a very narrow ledge of rock, with one knee on the upper shelf, and my back to two hundred feet of a cliff. I had just taken two plates, when the keeper successfully negotiated the corner and stood on the ledge. He said he could not have believed it was possible to get round that corner as we had done.

The two eggs were laid on the floor of a beautiful little cave about three feet high and the same width, and perhaps a couple of feet deep. There was no attempt at a nest, but there were two or three bits of stick and many whitened bones lying round the eggs, which were slightly incubated. The female lay dead on a rock about twenty yards off, where she had fallen to the keeper's gun some days before, when he had discovered the nest. She was a beautiful bird, but all my efforts to get to her were fruitless. The keeper assured me that the Peregrine had nested there every year since he came there, and he had usually been able to secure both birds. This year, however, when he shot the female, her mate had never reappeared in the vicinity.





PEREGRINE FALCON. *Falco peregrinus.* *Plate 1.*

¦ NATURAL SIZE.

PLATE II

PEREGRINE FALCON. *Falco peregrinus*

June 12th, 1896.—The young Peregrines depicted in this Plate were taken from a nest on the summit of the peak of the Dutchman's Cap, one of the Treshnish group, Inner Hebrides.

The old birds raised a most fearful hubbub with their loud chattering cries all the time I was having a tour of inspection on the island. When I had finished my round I climbed the peak, and after a short time succeeded in locating the site of the nest. It was about thirty feet from the top, on the east side, on a ledge quite overhung by rock. While I was standing on the edge of the rock debating whether to try and get down to it, or to go down and climb up, the female swooped at me and struck me violently on the left shoulder, tearing my coat slightly and hitting me smartly on the head with her wing. I think she was as startled as I was, anyway she did not come so near me again.

The three young birds were not in the nest. One of them was almost hidden among some rank grass in a corner, and the other two were at the end of the ledge on the other side of the nest. In and around the nest were three Puffins, a Kittiwake, and half a Manx Shearwater. I counted the feet and wings of sixteen Puffins, and there was a half dried-up carcase of a Wheatear which had not been picked by the young birds.

I took away two of the young ones and reared them by hand. They were very tame, and really grotesque little fellows, and I was quite sorry to part with them. They are now in the gardens of the London Zoological Society, where they should thrive well, as they were very strong, healthy birds.



PEREGRINE FALCON. *Falco peregrinus.*

Plate 11.

¼ NATURAL SIZE.

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LONG-EARED OWL

Asio otus

THE Long-eared Owl is a fairly common and pretty evenly-distributed resident throughout the British Islands, especially in those districts which abound in pine-woods. It is partially a migrant, and great numbers of them come to our eastern coasts, during the autumn, from Scandinavia. It is not met with in the Outer Hebrides, and is only an occasional visitor to the Orkneys and Shetlands.

The Long-eared Owl loves the woods of spruce and Scotch firs, and has greatly extended its range since the plantations of these trees have increased in numbers. It is quite as much at home in the little plantations among the cultivated fields, as it is in the large forests of pines in some of our northern counties. It is strictly a nocturnal bird, and rarely leaves its retreat until dusk; during the day it may be seen sitting in some thick fir or ivy-covered tree on a branch close against the trunk, and its whereabouts are often betrayed by the crowd of Chaffinches and Tits which collect to chatter and scold at the thief of the night.

The food of the Long-eared Owl consists of voles, mice, rats, beetles, and insects, and occasionally small birds, which it catches as it flies noiselessly past their roosting-places. The feathers of the victims are often found among the pellets at the nest or where the Owl roosts. The cry of this bird is a curious noise — impossible to describe on paper — sounding rather like the distant yelping of a dog; it has also a wailing cry, somewhat like a cat mewing. The old birds are rather silent, as a rule, but the young may often be heard calling about the woods soon after they have learned to fly.

The Long-eared Owl is a very early breeder, eggs being generally laid in March or the beginning of April, often when the snow is still on the ground, but late nests are very often met with. The bird generally takes possession of some deserted Crow's or Wood Pigeon's nest, and patches it up to suit its requirements, sometimes adding a lining of wool and feathers; very often, however, the nest is unlined, save by the few feathers of small birds which have been brought there for food, and quantities of pellets. The nest of this bird is very hard to discover, as no amount of shouting or hammering on

the trunk of the tree will, as a rule, dislodge the sitting bird. The only way is to climb to all likely-looking nests—a rather fatiguing process in a large wood, the bird often sitting quietly until the climber is actually at the nest, when she will fly silently away. The nest chosen may be at any height from the ground, but a fairly thick part of the tree is generally preferred. Sometimes an old Squirrel's nest is utilised, the top being usually torn off and the nest somewhat flattened before the eggs are deposited.

I came across a nest of this species in Tweedsmuir during the vole plague of 1892, when Owls, more especially the Short-eared, were abundant in the neighbourhood of these small pests. It was placed in a larch fir about forty feet from the ground, in a small patch of trees on the hillside. An old Pigeon's nest had been utilised, sticks had been added to it—chiefly small larch twigs—and a lining of sheep's wool, a huge straggling mass of which hung down from one side of the nest, and waved to and fro in the wind, making it very conspicuous. Both birds were at the nest, the one sitting on the eggs, and the other perched on the edge of it against the trunk of the tree. I regretted exceedingly that I had no camera with me, as such chances are rare, and I sat in the next tree within twelve feet of them for some time, and they never stirred. The nest contained a half-fledged bird, two tiny nestlings, and two eggs, both addled. I came across five or six Long-eared Owls' nests about this time (March 20th) in the same neighbourhood, but, with the exception of this one, all were in deserted Hooded Crows' nests. During the above-mentioned vole plague in Tweedsmuir, it was no uncommon thing to see the Owls abroad in the day-time after the young were hatched, flying silently over the hillside, and pouncing down on their prey. The Short-eared Owl was by far the commoner species, but I observed several Long-eared Owls among them.

The eggs of the Long-eared Owl are from four to six in number, as a rule, though as many as seven are sometimes found. They are rather more oval in shape than those of the Tawny Owl, and much smaller; they are, however, almost indistinguishable from those of the Short-eared Owl. They are pure white in colour and somewhat glossy, and vary in length from 1·75 to 1·5 inches, and in breadth from 1·3 to 1·25 inches.

The young birds, which are at first covered with a whitish down, remain some time in the nest, and when they can fly they sit among the branches of the neighbouring trees, where they are fed by their parents until well on in the summer. In the evenings they may be heard calling incessantly, making a noise rather like the mewing of a cat.

PLATE I

LONG-EARED OWL. *Asio otus*

May 29th, 1893.—This nest was taken in the Big Wood, Lake of Monteith. It had been originally built by a pair of Hoodie Crows, and was a large, bulky collection of dead heather stalks, larch twigs, sticks, etc., and was placed among the top branches of an old Scotch fir, rent and torn by storms and half blown down. The old tree grew near the top of a steep knoll in the middle of the wood. I saw a pair of Hoodie Crows near the place, and climbed to the nest to see if they had young ones there. I was very agreeably surprised when a Long-eared Owl flew off the nest. Though the date is an unusually late one for this species, the nest contained five fairly fresh eggs, and was lined with a good deal of sheep's wool and rabbit's fur. The male bird was roosting in a tree quite close by, huddled against the trunk. I put him up when I came down after photographing the nest.

It was no mean task to get a really good photograph of this nest—to get one at all, in fact—as it was in the very top of a huge old gnarled branch growing out of the torn and twisted trunk, forming a sort of second top to the tree, and must have been about eighteen feet from the steep side of the knoll, and much more from the root of the tree. What remained of the rest of the tree was rather lower than the branch the nest was in, and I couldn't see the eggs from it; fortunately it was strong, and, by erecting a sort of flagstaff, made from a dead stick about ten feet long, to which I lashed my camera, I was able to focus on the nest and get two satisfactory photographs showing the eggs in it.

I rested on the knoll for a while after my labours, and was soothing my nerves with the fragrant weed, when the two Owls flew silently round the tree and alighted in a thick part of it. After about ten minutes, during which time I lay quite still, one of them flew round the tree once or twice and returned to its post beside the other. In about five or six minutes they both flew up to the nest, and, after hovering about it for a moment, the hen

bird alighted on the nest and the male took up his position in a dark part of the tree close below. I watched them for about twenty minutes, but neither of them moved. I found another nest, by pure chance, as I was returning through the wood. I saw an Owl sitting in a thick tree and threw a stick up at it; two birds immediately flew out of the tree, and on climbing up I discovered, in a very thick part, an old Pigeon's nest with no lining except a few Yellow Hammer's feathers and some pellets, and in the nest were four fresh eggs.





LONG-EARED OWL. *Asio otus.*

¼ NATURAL SIZE.

SPARROW HAWK

Accipiter nisus

THE Sparrow Hawk is the commonest and most widely distributed of our British Hawks, and may be found in all wooded localities throughout Great Britain and Ireland. In the wild and treeless moors and glens of the north and west of Scotland, the Hebrides, Orkneys, and Shetland, it is much rarer, and in some localities is only known as a summer visitor.

The favourite haunts of the Sparrow Hawk are the woods, plantations, and coppices among well cultivated lands, where small birds abound, and the belts and clumps of firs along the edges of the moors or in the little glens; there he may be seen flying silently and swiftly along the edge of the wood, in search of his prey, darting after it like an arrow through the tangle of branches on the edge of the cover.

Whenever a bird is pursued it instantly endeavours to hide itself in some dense cover into which the Hawk cannot penetrate; there it will lie hid till its enemy has departed. The evening is perhaps the best time to see the Sparrow Hawk in pursuit of his prey, as this appears to be his favourite hunting-hour. Down he comes like a thunderbolt past the evergreens where the Greenfinches are assembling to roost, and is aloft again with one of them quivering in his talons almost before you have seen him. Even in the farmyard, among the stacks, he brings terror among the crowds of small birds feeding on the scattered grain and seeds; gliding along like a shadow, he moves past, bearing off one of them in his claws. He will often carry off the young chickens from under the hen-wife's nose. The rapacity of the bird is indeed marvellous, and instances of his boldness are without number. I well remember seeing one meet his death by his very boldness. A Robin had got into the house and was fluttering at one of the windows trying to find some way of escape. I happened to come into the room, and, seeing the poor prisoner, was going forward to release him, when there was a tremendous crash against the plate-glass, and a dark object fell down outside; on going out, I found a Sparrow Hawk lying on the grass, quite dead, with its skull fractured. This is evidently not a rare occurrence, as

I vividly remember my joy, when quite a small boy, at finding one lying dead upon the gravel at the front door one Sunday morning, having killed itself in a vain endeavour to reach a Sparrow which had got into the house; when stuffed, this bird formed the centre-piece of my collection for many a day.

The food of the Sparrow Hawk is chiefly composed of small birds, from a Blackbird downwards; but they will strike and successfully kill Wood Pigeons, and I have seen one pounce on a Water Hen as it ran across a grass field; he was, however, quite unable to carry off his prey in this instance, and was caught in a snare set beside it some twenty minutes afterwards. He also varies his food with an occasional young rabbit, and will take mice, water-rats, or frogs. The refuse of the Sparrow Hawk's food, like that of all birds of prey, is ejected in the form of pellets: great numbers of these, as well as the larger feathers of the victims, may be found round some tree stump, rock, or stone in the middle of the wood or thicket, where he is wont to retire to feed.

The Sparrow Hawk is rather a late breeder, eggs being rarely laid before April. The nest is usually placed half-way up some tree on a large branch, and is nearly always built against the trunk. It is fairly large, and is always made of dead sticks, the larger and coarser ones forming the foundation, smaller and finer ones the shallow cup in which the eggs are laid. The nest may be found in many kinds of trees, principally in firs in Scotland and in England in the oak or beech. Curiously enough, the Sparrow Hawk does not always begin to lay as soon as the nest is finished, but often puts off several days before depositing the first egg; she begins to sit as soon as it is laid, and the others are laid at irregular intervals, so that the nestlings when hatched are usually of quite different sizes and ages. The nest, and often part of the tree in the immediate vicinity, are generally covered with a whitish down from the bird's plumage, and there are usually a few feathers of various descriptions in the nest.

The eggs vary in number from four to six, five being the most common number in a clutch; they are rather round in shape, and are very handsomely marked as a rule. The ground colour is a delicate bluish-green, and the spots, which are often very bold and striking in outline, are rich reddish-brown of various shades. Some specimens are so sparingly marked that the spots are almost invisible, while others are richly clouded and spotted all over, almost entirely hiding the ground colour; the markings are often collected together in a sort of zone round the large end of the egg. They vary in length from 1·7 to 1·4 inches, and in breadth from 1·4 to 1·2 inches.

The young when first hatched are covered with a whitish down, fragments of which still adhere to the feathers for some time after they can fly.

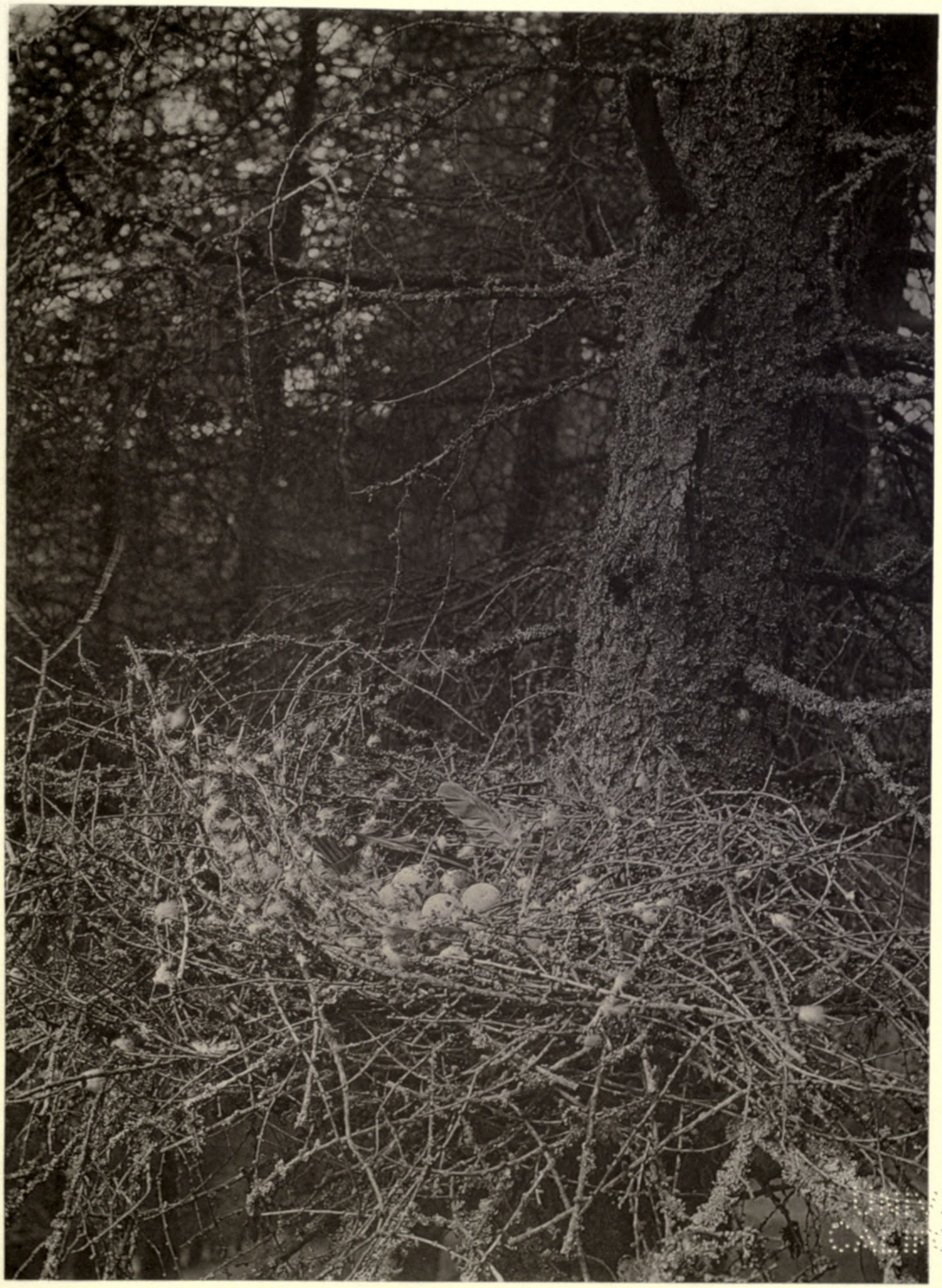
PLATE I

SPARROW HAWK. *Accipiter nisus*

May 28th, 1893.—This Plate was taken from a nest in Gleny Wood, Lake of Monteith; it was built half-way up a larch-tree in a very thick part of the wood, on the steep side of the hill covered with moss-covered rocks. I watched the male soaring round and round above this part of the wood at a great height in the air, and guessed there must be a nest somewhere about; it was very carefully hidden against the trunk of the tree, and it took me fully an hour to discover its whereabouts. It was about thirty feet from the ground, and was entirely built of larch twigs of different thicknesses, the outside ones being the coarsest; the whole nest was covered with a whitish down, and had three or four of the bird's large wing-feathers in it. The female sat very close, as the five eggs were highly incubated, and she swooped at me twice while I was climbing up to the nest.

At first I was rather doubtful whether I could get at the nest to photograph it or not, but I managed it in the end by supporting my camera on a thin branch on the next tree and fastening it to the trunk, so that I could look across at the nest. I was seriously hampered by the exceeding rottenness of the branches, as, in a thick wood, the lower branches of a larch are always very weak and rotten, and break short off at the trunk the moment any weight is put upon them. I was pretty well cramped by the time I succeeded in taking two plates of it.

I paid a visit to this nest when the young were fully fledged, and found the whole place white-washed with their droppings, and strewn with pellets and feathers. The nest itself was a mass of pellets and feathers, wings of the Greenfinch, Chaffinch, and Willow Wren, and two or three skulls of mice. The young birds, of which there were four, were out of the nest, on the slender branches of the tree, climbing about in a very awkward manner and hanging on with their bills like parrots.



SPARROW HAWK. *Accipiter nisus.*

⅓ NATURAL SIZE.

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LESSER BLACK-BACKED GULL

Larus fuscus

THE Lesser Black-backed Gull is a resident in the British Islands, and breeds on most of the Scottish coasts and outlying islands. In some parts of the country, during the breeding season, colonies of these birds may be seen on the islands of inland lochs, or even on the swampy parts of the moors. In England, south of the Farnes, it is extremely local during the breeding season, and in Ireland it breeds only in one or two favoured localities.

It is not quite so large as the Herring Gull, and, like that bird, does not assume its adult plumage until after the fourth Autumn moult. It is a gregarious bird in winter, as well as during the nesting season, and collects at that time in large flocks on the mud-banks in estuaries, where it may be seen resting, with one leg tucked up and its head buried among its scapulars, half asleep, or feeding on the small marine animals which lurk in the little pools. They may often be seen in small parties sitting on the water and rising lightly on the crests of the waves.

The food of the Lesser Black-backed Gull consists principally of fish and small marine creatures of all kinds, and it is fond of frequenting the harbours, where it picks up all kinds of floating garbage. In spring-time they follow the plough for the worms and grubs which are turned up, and devour great quantities of the newly sown grain in sowing-time. When winter comes round they wander far from their summer haunts, and follow the shoals of fish round the coast, or make excursions up the larger rivers. The Lesser Black-backed Gull is a sad robber, and destroys immense quantities of the eggs, and even the young, of the smaller Gulls, Terns, and Ducks. At the

time of my visit to the Farne Islands in 1895, they had totally destroyed the eggs of two colonies of the Sandwich Terns, and we saw them tearing up the down and carrying off the eggs of the unfortunate Eiders when they left their nests to feed. The bird is multiplying enormously there, and unless something is done to check its increase, it will soon drive away all the rarer and more interesting species from the Islands.

About the end of April the Lesser Black-backed Gulls return to their accustomed haunts, and begin almost immediately to repair their nests, eggs being laid during the first week in May. On bare rocky islands the nests are placed in any convenient niche or crevice, and are large, untidy structures of dead grass and sea-campion, or even bits of turf. On the Farne Islands, where the Lesser Black-backed Gull reigns supreme, the nests are placed among the masses of sea-campion in slight hollows in the ground, and are entirely composed of pieces of that plant gathered green, sometimes being only crushed down plants, the eggs laid on the top. In these parts of the Islands, when the young are hatched, it is very difficult to avoid crushing some of them, as every tuft of campion has one or two crouching in it, trying to hide themselves. Some of these colonies of Lesser Black-backed Gulls increase very rapidly. I remember a pair of these birds taking up their quarters on Flanders Moss in the valley of the Forth in the spring of 1880; in 1885 we found twenty-one pairs breeding there, in 1891 seventy-six nests were found, and on my revisiting the colony in 1893 I found a hundred and thirty-four nests of this species containing three eggs each; this increase went on in spite of the war waged against them by the keepers, who took the eggs and trapped or shot as many old birds as possible. The destruction of fish in the neighbourhood must have been very great, as besides these birds there was a colony of Black-headed Gulls — some eight hundred pairs — not half a mile distant, and almost every nest had the remains of one or two small trout or parr beside it. The Lesser Black-backed Gull is a very quarrelsome bird, both at its feeding-grounds and near its nest, and frequently fights with its neighbours. On the Culbin Sands I once took hold of a pair, at one of the colonies, with their bills firmly locked in each other's grasp, flapping furiously with their wings and uttering muffled cries of rage.

The eggs of this species are three in number, and vary much in size, shape, and colour. The ground colour varies from a dirty white to pale bluish-green, and from pale buffish-brown to dark brown. They are blotched and spotted, more rarely streaked, with rich dark brown, very nearly black in some specimens, and have brownish-grey or purple-grey undermarks. Some

specimens are pretty evenly spotted all over with small markings, others have few but rather large blotches, and one variety has the markings chiefly at the large end of the egg, and forming a zone round it. There are two somewhat rare and very beautiful varieties, one of which has reddish spots on a light greenish ground, and the other, which is very rare, has a pale reddish-buff ground with rich red-brown blotches on it and pale reddish undermarks. I have only once met with the latter variety, in a colony on the Culbins. The eggs of the Lesser Black-backed Gull are almost indistinguishable from those of the Herring Gull, and need most careful identification; they vary in length from 2·9 to 2·4 inches, and in breadth from 2·1 to 1·8 inches.

Young in down of this species are greyish-buff on the upper parts and white on the belly. The head and throat are conspicuously spotted with black, and the rest of the upper parts have dark brown mottlings. The legs and feet are flesh-coloured.



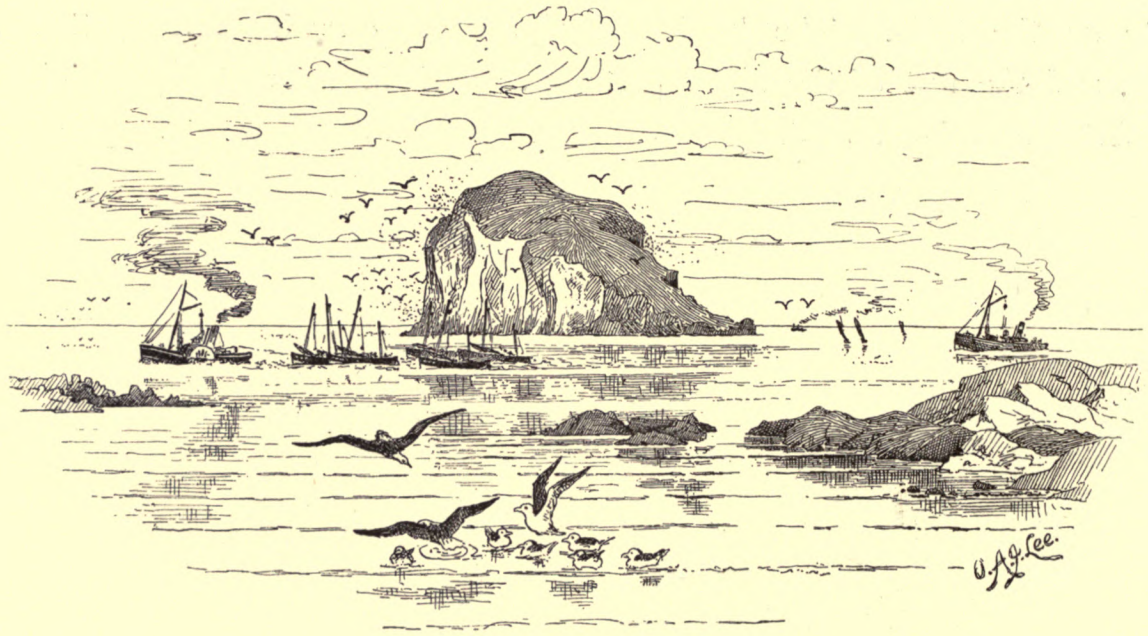


PLATE I

LESSER BLACK-BACKED GULL. *Larus fuscus*

June 4th, 1895.—The nest depicted in this Plate was photographed on the Outer Wide-opens, Farne Islands, among the scurvy grass which entirely covers the greater part of the Island, and was in full flower at the time of our visit. The nests, of which there were hundreds, were simply bare spots on which the scurvy grass had either been picked or trampled down, the eggs being laid in the depression thus formed.

The birds were very bold, and alighted within twelve or fourteen yards of us, incessantly uttering their alarm notes, and frequently fighting fiercely with their neighbours. They are inveterate robbers, and we saw them actually carry off the eggs of their own species when the owner's back was turned. They also destroyed hundreds of the eggs of other species, but the Common and Arctic Terns bravely mobbed them and generally drove them successfully from their colonies.

Although we examined many hundreds of eggs on the Farnes, we were unable to come across the rare and beautiful red variety of the Lesser Black-backed Gull's egg. There was one very compact colony on Staples Island: we counted a hundred and seventy-four nests in one piece of ground covered with masses of sea-campion and riddled with Puffin burrows, into which one frequently sank up to the knees, so soft was the undermined soil. The Gulls and Puffins were on the most amicable terms, the latter, no doubt, knowing that the Gulls could not get at their eggs.



LESSER BLACK-BACKED GULL. *Larus Fuscus*

½ NATURAL SIZE.

Plate I.

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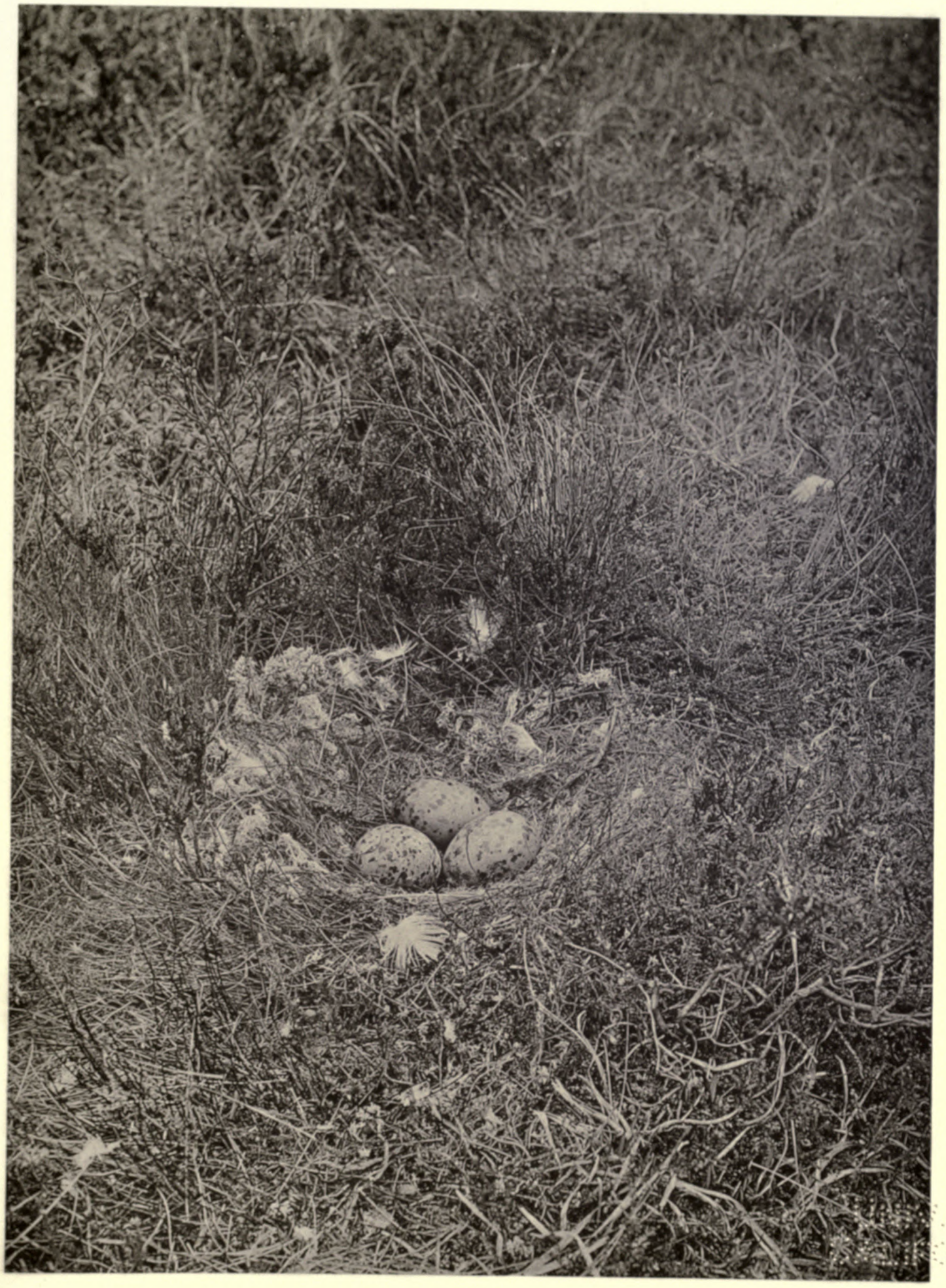
PLATE II

LESSER BLACK-BACKED GULL. *Larus fuscus*

May 10th, 1893.—This Plate was taken from a nest on Flanders Moss in the valley of the Forth. The Lesser Black-backed Gulls choose a dry part of the moor for their colony, which is somewhat scattered, placing their nests among the long heather and dwarf bog-myrtle some distance from the large colony of Black-headed Gulls, who seem to prefer the lower and more swampy part of the moor. The nests were usually placed on some bare patch beside a large tuft of heather or bog-myrtle, and were somewhat bulky structures of soft moss and small bits of dead grass.

The birds were very aggressive while I was at the colony, continually swooping down at my head, often almost striking me, and I could always feel the wind from their wings as they rushed past me. I once actually struck one with my stick as he swooped past. He was quite as astonished as I was, and did not repeat the experiment, keeping at a respectful distance during the rest of my visit. Often when I was examining a nest, the owner would eject a fish or two from its stomach in a vain attempt to scream loud enough to drive me away. Some of these fish must have weighed nearly five ounces, and were generally half digested, having little or no skin on them.

This colony has steadily increased in spite of all the keepers can do in shooting and trapping them and destroying the eggs and young. They are not at all a desirable adjunct to a grouse moor, as they destroy many eggs and probably young birds too, being quite as cunning as the Hooded Crow and much more rapacious.



LESSER BLACK-BACKED GULL. *Larus Fuscus.* *Plate II.*

½ NATURAL SIZE.

СУТЬЮНИОР
ПИАР ОТ

ROSEATE TERN

Sterna dougalli

THE Roseate Tern is the rarest of all our British-breeding Terns, and very few of its breeding-places are known. It is usually found in company with numbers of the Common or the Arctic Tern, generally nesting among their colonies. It has, however, been recorded as breeding on the islands off the coast of Lancashire, on the Farne Islands off Northumberland, and on one or two of the islands off the coast of Scotland. Its chief breeding-places are on the American coasts.

It is a most graceful bird on the wing, and may be generally recognised by its short wings and long, forked tail. It is about the same size as the Common Tern, but the adults often have the under parts suffused with a beautiful roseate tinge. It is essentially a sea-coast bird, its food consisting of small fish, which it catches in the same manner as its congeners, hovering in the air like a miniature kestrel, and pouncing down on its prey to rise immediately with a tiny fish held by the head.

The call note of the Roseate Tern is a long-drawn '*krr-ēēē*,' rather like that of the Common and Arctic Terns, but much more shrill and prolonged. When disturbed at its breeding-haunts, besides the usual '*kĭk-kĭk-kĭk*' which is common to all the Terns, it has a long piping note, '*kēē-ēē-ēē*,' almost like a whistle, which can readily be distinguished among the babel of cries raised by the accompanying throng of Common and Arctic Terns.

In this country the Roseate Terns arrive at their breeding-stations about the last week of April, and begin to lay about the end of May. On my visit to the Farne Islands in June 1893, I distinguished the cry of the Roseate Tern among the screaming of the hundreds of Common Terns on Staples Island, and after much trouble, and nearly an hour's patient watching, I succeeded in marking the three birds to their respective nests. As far

as I could make out these were the only three pairs on the Farnes that year, and all the nests were quite close together on a stretch of shelving rock covered with lichens and sea-pink.

On the 20th May 1887, I observed two pairs of Roseate Terns on the Bar off the Culbin Sands, Morayshire, and spent the greater part of the day in watching them, and with great difficulty managed to find the nest of one pair containing three eggs. The birds were very shy, and though I was well concealed some distance from the nest, and the eggs were slightly incubated, the female flew about for nearly two hours before she at length went on to the nest. It was merely a depression in the sand with a few little bits of bent round it. The bird stood with her wings elevated for a few seconds before settling on to her eggs. The other pair quite baffled me. I returned to the Bar on the 26th, and again saw the Roseate Terns, and succeeded in finding two more nests after a day's careful watching, as there were many nests of the Common Tern quite close. I spent two or three days watching these birds, and counted seven pairs altogether on the Bar; two of these were not nesting, as far as I could make out. Their habits do not apparently differ from those of the Common and the Arctic Terns. The male is very attentive to his mate while she is sitting, and often hovers over her in the air, calling to her. He feeds her on the nest with small fish, and I twice saw one carry a large sand-eel to the sitting bird, when they both devoured it, tearing it up and eating it in little pieces. I endeavoured to find out whether they returned the following year; but Tern colonies are most unaccountably shifty, especially if subjected to any disturbance or uneasiness, and as far as I can learn, no Roseate Terns have been since seen at their haunts on the old Bar.

The eggs of the Roseate Tern vary in number from two to three, and are difficult to distinguish from those of the Common and Arctic Terns. The ground colour varies from pale buff to brown, more rarely pale olive-green. The surface markings are dark brown, sometimes nearly black, and generally are more like streaks than spots, each streak being slightly shaded towards one end; the underlying marks bear the same character, and are pale blue-grey. The eggs are generally more pointed than the average Common Tern's egg, and have a slightly pointed large end, and the texture of the shell is finer as a rule. They vary in length from 1·7 to 1·6 inches, and in breadth from 1·3 to 1·1 inches.

Young in down are pale buff on the upper parts, blotched and spotted with grey and white, and are white on the under parts.

PLATE I

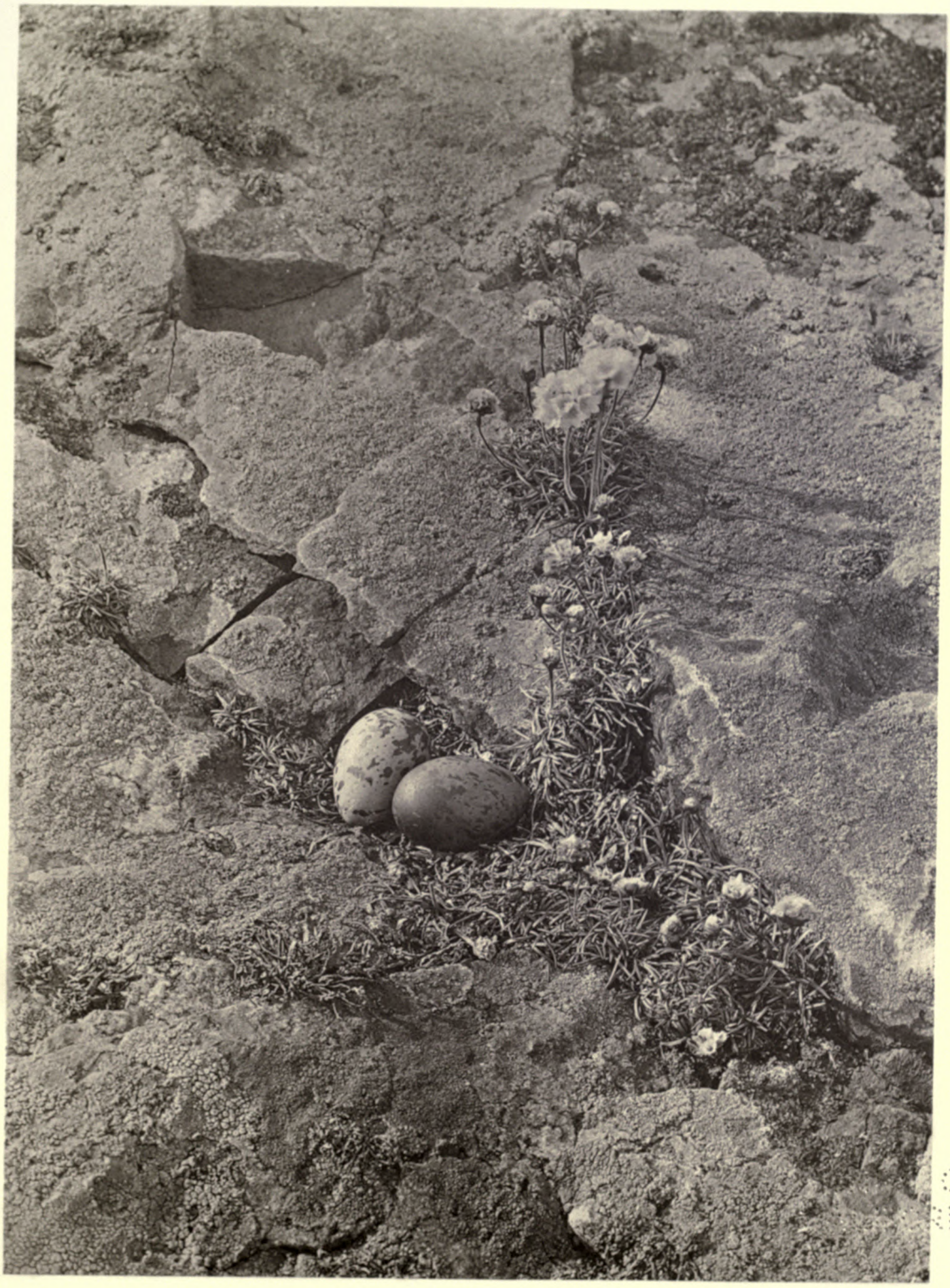
ROSEATE TERN. *Sterna dougalli*

June 10th, 1893.—This nest was one of three identified on Staples Island, at the Farnes. I distinctly made out the cry of these birds among the thousands of screaming Common Terns all round, and with the aid of my glasses succeeded in roughly locating their nesting-place. I then ambuscaded myself near the place, and after a long and patient wait was at length able to watch the three birds to their nests.

The Roseate Terns were very shy, and though all the Common Terns had been sitting for some time on their eggs, none of the Roseates would go near *their* nests, but flew backwards and forwards calling to each other, now and then hovering in the air with their long, forked tails pointing downwards. I saw only four birds, and three of these had nests; so I came to the conclusion that there were three pairs, and that the other two males must be away somewhere feeding.

After a long, weary watch, one of the birds hovered in the air, then dropped a few feet, hovered again, and so on till it alighted at its nest. The other two soon followed suit, while the fourth flew out to sea and disappeared. I gave them a few minutes' grace, and then stood up, keeping my eye on them; they were the first to rise. I walked quickly up to the spot, and found the three nests quite close together on a sloping, lichen-covered rock; the nearest Common Tern's nest was some ten feet away. None of the Roseate Terns had made any nest; the eggs were simply laid on the little plants of sea-pink which grew out of the crevices in the rock. Two of the nests contained two eggs each, and the third three.

There is apparently very little difference between the habits of this species and those of the Common and Arctic Terns at the nest. The flight of the Roseate Tern is rather more jerky, and it is slightly quicker in the movement of its wings, which are shorter than those of the other two species.



ROSEATE TERN. *Sterna dougalli.*

† NATURAL SIZE.

AMONG BRITISH BIRDS
IN THEIR NESTING HAUNTS
ILLUSTRATED BY THE CAMERA

BY

OSWIN A. J. LEE

PART II.

COMMON COOT	2	PLATES
SHOVELER	1	"
KITTIWAKE	1	"
WATERHEN	2	"
WILLOW WREN	1	"
SANDWICH TERN	1	"
SHELD-DUCK	2	"

EDINBURGH. DAVID DOUGLAS.

THE COOT

Fulica atra

THE Coot is a common resident in the British Islands, and frequents the margin of most of our larger sheets of water, ponds, and sluggish rivers. It is a resident on the Hebrides and Orkneys, but is only a visitor to the Shetlands. It is much more local in its distribution than the Waterhen, and, unlike that bird, is often to be seen in large numbers on the coast during a hard winter; there it prefers mud-flats and low-lying grassy ground covered at high tide, and deeply dented by innumerable little creeks, which afford excellent feeding-ground at low water. In such places it may often be seen during winter feeding among the sea-grass and other salt-water plants.

The Coot is not a land bird, although it is not ungainly in its movements while feeding on the banks of the loch or pond where it has taken up its abode; but it is certainly more at home on the water, where it swims and dives with great ease, and progresses in the same peculiarly jerky way as the Waterhen. It may often be seen floating on the water with its head buried among its feathers, apparently asleep, and will remain for a long time in the same place. When alarmed it usually dives, and will swim a long distance under water to the nearest cover. It only takes to its wings as a last resource, flying clumsily along the surface with its legs trailing in the water for some distance before getting fairly on the wing; once fairly started, however, it can fly with great rapidity. It is very wary in a wild state, and, as it feeds during the day, often prevents the sportsman from approaching the flocks of ducks and sea-fowl by giving the alarm. During the breeding-season it may often be seen late at night flying round and round above the reeds, where its mate is sitting, uttering its curious note.

The Coot is a much later breeder than the Waterhen, and seldom begins

nesting operations before the middle of April, and full clutches of its eggs can hardly be found before the beginning of May. The nest is a large untidy structure, loosely built—a big heap of dead reeds, water-plants, and leaves, whatever comes handy—and is most often placed in shallow water among tall reeds or rushes, the foundation being made on the bottom. It is usually tied to the surrounding reeds, and is much more carefully built inside, being lined with the dead leaves of reeds. The nest is sometimes built among the large weeds on the banks of the lake, or on the half-submerged branches of some tree which has fallen into the water among reeds or rushes. Often it is built on a mass of floating reeds caught among some patch of water-plants.

The Coot sits very closely, and slips quietly away into the water on the approach of danger, skulking among the reeds and rushes not far from its nest. I remember being intensely amused at an old Coot who tried to conceal herself after the manner of that wise bird the Ostrich. I observed her sitting on her nest, and as she appeared to be unusually tame, I cautiously approached in my boat to try and get a photograph of her. Just as I was getting within range she stood up in the nest, and, after looking at me for a few seconds with her head on one side, she turned her back on me and quietly hid her head among the reeds and leaves over the far side of the nest. She stood there for some time—a great, conspicuous object showing black against the light colour of the dead reeds around. I was so overcome that I made some slight noise putting up my camera, and she slowly disappeared over the side of the nest before I could secure a portrait of her.

I have on two occasions observed the Coot remove its eggs from the nest. The first occasion was on the advent of a high flood. While fishing one day in a pretty heavy and rising stream on the Forth, I saw a Coot swimming to the shore from a small island of reeds carrying something in its bill and pressed against its breast. On going closer I found it was an egg. I saw her carry four eggs to a rough nest on the bank before the nest in the patch of reeds was submerged. I have reason to believe that the young birds were safely hatched out from the new nest. On the other occasion the rats had carried off several of the eggs from a Coot's nest on the banks of a small pond at home, and I saw the old Coot carrying an egg, held in her bill and supported on her breast, to an overhanging rhododendron on a small island near. On investigation I found three Coot's eggs in an old Waterhen's nest; the bird, however, did not succeed in hatching them out.

From seven to twelve eggs are usually laid by the Coot, sometimes as

many as fourteen, though nine is an average clutch. They are pale buff—very nearly white—in ground colour, spotted pretty evenly all over with small very dark brown specks varying from the size of a pin's head to tiny dots, and in some cases there are a few greyish undermarkings. They differ very considerably in size even in the same clutch, and vary in length from 2·2 to 2·0 inches, and in breadth from 1·5 to 1·1 inches. They are quite unlike the eggs of any other British bird.

Young in down are black, some of the filaments on the head and neck being tipped with white and red, the tip of the bill is bluish white with a black spot on the point, the base of the bill is scarlet shading into orange on the face, and there is a bluish stripe above each eye extending to the ear.



PLATE I

THE COOT. *Fulica atra*

April 26th, 1893.—The nest from which this Plate was taken was chosen from some eight or nine examined, during one afternoon, in a huge reed-bed among the shallows on the south shore of the Lake of Monteith. All the nests contained their full complement of eggs, as the season was warm and early.

The nest which I photographed was evidently repaired from year to year, as the decaying reeds of the old nests had formed quite a little mound, on the summit of which the new nest was placed. It was built entirely of pieces of the dead reeds growing around, and lined with their dry leaves, beautifully plaited into the coarser reeds of the nest, and contained nine eggs, slightly incubated. The old bird sat quietly on the nest until I got within twenty yards of her, then she got up, and, slipping very quietly into the water, swam quickly away among the reeds. She kept anxiously moving about all the time I was getting my camera placed, and continually uttered her peculiar note, which cannot be described on paper, no doubt intending to remind me that the eggs were getting cold.

I had great difficulty in getting my camera set up, as the bottom of the lake was so swampy that the legs sank right in, and the boat was too unsteady; however, I managed to prevent their sinking altogether by lashing the stretchers from the boat across them, and procured satisfactory photographs.

I retired to a little distance and lay down in the boat, watching through my glasses. The old bird returned after a few minutes, and cautiously went on to the nest. She carefully turned all the eggs with her bill before settling herself on the nest. It was most amusing to watch how carefully she arranged the reeds on the edge of the nest all round her, giving them little dabs with her bill. When she had got them all settled to her liking, she buried her head among her scapulars and apparently went to sleep.



COOT. *Fulica atra.* *Plate I.*

1/4 NATURAL SIZE.

UNIV. OF CALIFORNIA

CONSERVATION
TREATMENT

PLATE II

THE COOT. *Fulica atra*

May 5th, 1895.—The nest depicted here is a very fair type of the floating Coot's nest, which is generally a heap of reeds or grass built on some mass of water-plants, or simply anchored among the growing reeds. This nest was entirely composed of floating reeds, anchored to the few straggling ones growing up from the bottom in some five feet of water, on the outskirts of a thick reed-bed at the mouth of a burn running into the Lake of Monteith; on the top of the floating pile a few smaller pieces of reed formed a sort of cup, which was lined with dry sedges and dead reed leaves.

The old bird left the nest when I was some fifty or sixty yards away, and disappeared into the thick masses of reeds, where I could hear her moving restlessly about and calling every now and then. The nest was a very large structure, and must have covered a good deal more than a square yard of surface. It was very conspicuous when the bird was sitting on it, as it was quite out in the open, at the end of a sort of point in the bed of reeds. It contained nine perfectly fresh eggs.

I had some difficulty in obtaining a photograph of it, as the water was too deep to set up the legs on the bottom; but I managed it by driving an oar into the mud at the bottom and tying the legs round it, so that the camera was on the top. I could then incline the oar till the nest was in the centre of the plate; being alone, however, the boat *would* always bump against the oar just as I had it all ready to take off the cap. While changing my plates at some little distance, I had leisure to watch the return of the old bird; she seemed to have great difficulty in getting on to the nest, as the floating reeds all round would hardly carry her weight, and seriously interfered with swimming.



COOT. *Fulica atra.* *Plate II.*

1/7 NATURAL SIZE.

UNIV. OF
CALIFORNIA

SHOVELER

Spatula clypeata

THE Shoveler is somewhat sparingly distributed throughout the British Islands, and although a fairly common winter visitor, is only locally met with during the breeding season. In the few localities in Scotland, where I have had the opportunity of observing the Shoveler during the breeding season, it has greatly increased in number during the last few years.

Shovelers are never seen in large flocks, as most of our other species of ducks are; they usually fly in small parties, sometimes only a pair being seen at a time; but these parties of Shovelers generally attach themselves to some large flock of other ducks. In size it is a somewhat smaller bird than the Mallard, and like that duck it may often be seen on the coast during the winter, feeding on the mud-flats when the tide is out. As a rule it prefers lochs and ponds not far from the sea, solitary lochs, where there are no trees—among moorland for preference—and where the shores are covered with tall reeds and rushes growing well out into the shallow water, and plenty of floating weeds and water-plants.

The food of the Shoveler consists of small insects, fresh-water shrimps, molluscs, or small fish, and it will occasionally eat young grass-shoots and buds of water-plants. They do not dive for their food as a rule, but may be seen, tail upwards, in shallow water feeding on the bottom. Their bills, which are very broad at the point, are provided with sensitive plates specially adapted for sifting mud, and they are very fond of paddling about in shallow muddy water, feeding with their head and neck under the surface.

It is a somewhat silent duck, and its '*quack*' is not unlike that of the Mallard, though hardly so harsh; on the wing its note is a deep '*gŭck-gŭck-gŭck.*' During the pairing season the males may be constantly seen chasing the females in the air, and until she begins to sit the female is usually followed by one or two males every time she leaves the nest to feed.

The Shoveler is rather a late breeder, and does not begin to lay until well

on in May—even later in some localities. The nest is generally in the open, well hidden among the long grass or heather, or often in the centre of a rush-tuft, where the bird tears out the centre of the plant and forms a deepish hollow, adding a few bits of dry grass or moss, and lining it plentifully with down, with which she carefully covers the eggs when she leaves the nest to feed. At first the nest is only slightly lined with dry grass, but as the full complement of eggs is laid, the down is added and soon forms a beautifully soft cup. The Shoveler sits very closely—incubation lasting from twenty-two to twenty-four days—and will only leave her eggs when almost trodden on. When flushed she flies low and heavily, and plumps down in the water not far off, restlessly swimming back and forward and turning round and round, anxiously watching the fate of her nest, and uttering a low '*quaack*' from time to time.

The eggs vary in number from seven to twelve, though nine is perhaps the most usual number. Only one brood is reared in the year; when the first nest is destroyed a second is made, but these second nests rarely contain more than five or six eggs. The eggs are very pale buff, with a slight tinge of olive-green, and vary in length from 2·2 to 1·7 inches, and in breadth from 1·5 to 1·4 inches. The flakes of down are not quite so large as those of the Mallard, and are dark grey in colour with paler centres and very conspicuous white tips.

Young in down are almost uniform brown on the upper parts, with indistinct pale spots; the under parts are buff colour, darker on the throat, and they have the dark brown stripe through the eye. When the young are hatched the female is very attentive to them, and will defend them vigorously.



PLATE I

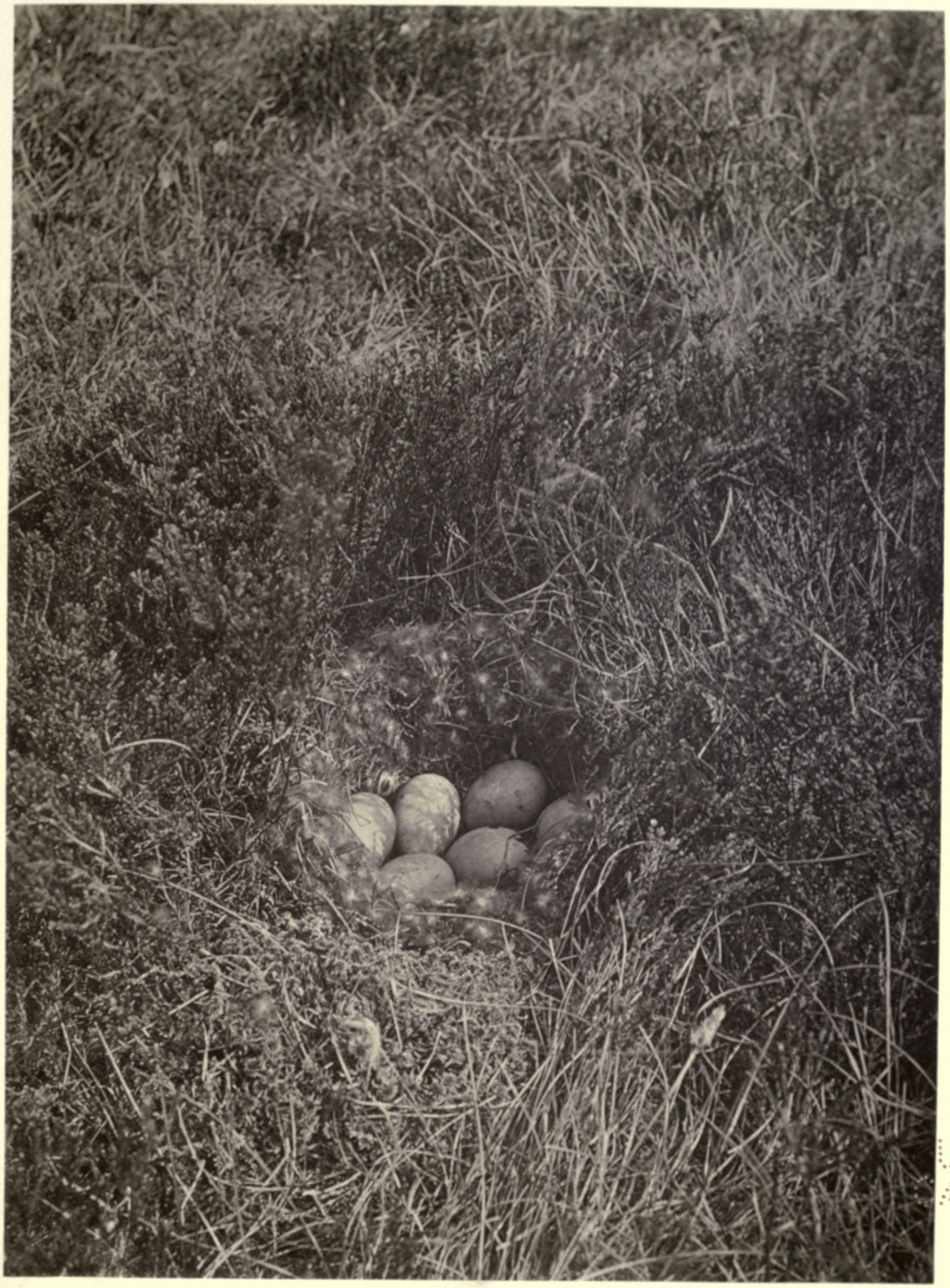
SHOVELER. *Spatula clypeata*

May 6th, 1893.—This was an exceptionally early season in Scotland, and many birds laid their eggs fully a fortnight earlier than usual. I paid a visit to a small loch among the moors in South Perthshire, where I had repeatedly seen Shovelers during late summer. The nest illustrated was chosen from some seven or eight which we came across on the shores of the loch. They were placed among the heather, tufts of rushes, and coarse grass round the edge of the loch, and were never farther than a hundred yards or so from the water. They were rather deep depressions in the ground, lined with a little moss or dry grass and a large mass of down. Some nests contained as many as eleven eggs, though nine was the most common number.

The birds sat very closely, as the eggs were highly incubated; but I was unable to get a photograph of any of them on the nest, as they always departed hurriedly, just at the critical moment when I was focussing them.

The nest in the photograph was among short heather, grass, and patches of moss, quite close to the water, and contained nine highly incubated eggs, two of which were already chipped by the chick inside. The drakes swam about in the middle of the loch in a small party, and were joined by the ducks disturbed from their nests; the latter, however, invariably returned to their nests as soon as we were a little distance away. Photography was rather difficult owing to the wind, which made the heather and grass wave about in a most annoying manner.

I revisited the loch in 1895 on the 19th of May, but the season was very late, and although we found fourteen nests of the Shoveler, none of them contained more than four eggs. The keeper told me that the ice was not broken up on the loch till the 21st of March, and that this made the birds late.



SHOVELER. *Spatula clypeata.*

1/3 NATURAL SIZE.

UNIV. OF
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California

KITTIWAKE GULL

Rissa tridactyla

THIS beautiful little Gull is one of the most abundant of its genus throughout the British Islands, but as it is always found about the cliffs and rugged headlands or rock faces on our coasts, during the breeding season, it is only in districts where these occur that its colonies need be looked for.

Perhaps the best known of these cliff-sites are the Bass Rock, the Farne Islands, and Flamborough Head on the east coast; on the south coast there are many on the rugged coasts of Devon and Cornwall; the Kittiwake is also common on the Welsh coast, and on all the rocky islands and coasts of Scotland, where there are some enormous colonies: it is also common on the Orkneys and Shetlands and the Hebrides. In Ireland it is also widely distributed, and breeds in all suitable rocky localities.

The Kittiwake, unlike its congeners, is seldom, if ever, seen feeding in the fields, preferring to obtain its food on the water, where it may be seen pouncing down on the myriads of little fish which come up with the tide, reminding one rather of the actions of the Terns. It is very powerful on the wing, and is perfectly at home when a gale is blowing, often hanging suspended in the teeth of the wind, absolutely stationary, without a movement of its extended wings. The cry of the Kittiwake, from which it takes its name, may be represented by the syllables '*Kitti-vah—kitti-vah*,' and does not sound unlike 'get-away—get-away,' when the birds are disturbed at their nesting-places; it goes through various modifications as the birds chatter among themselves on the cliffs.

The food of the Kittiwake consists largely of small fish, though it also takes small crabs and shellfish, and may be seen about many of our harbours during the winter, picking up small floating scraps of refuse: it also follows the fishing-boats and picks up the fish which are thrown over as being too small for sale.

Early in spring the Kittiwakes return to their old breeding-haunts and

begin to repair their nests. Their favourite breeding-places are on the perpendicular cliffs, rising sheer from the water; here they build their nests on every available point or ledge, sometimes quite close down to the water. On the Bass Rock, where the tops of the cliffs are entirely taken up by the Solan Geese, the Kittiwakes cluster about the base of the cliffs in company with the Guillemots and Razorbills.

The Kittiwake is much more painstaking in the construction of its nest than most of the gulls are, though it is usually a very dirty structure outside, and, like most of the rocks around, is completely white-washed with the droppings of the birds. The foundation is generally made of little bits of turf or small plants of sea-pink torn up by the roots, which with much wet, and constantly being trampled on by the birds, soon becomes a solid mud cake of great durability; pieces of seaweed, sea-campion, and green grass are next added, and the whole is lined with fine dry grass and a few small feathers.

The eggs of the Kittiwake vary in number from two to three, but on rare occasions four may be found; they have the ground colour varying from a pale greenish blue through shades of green and olive to pale buff and brown; underlying shell-markings are pale brown and purple grey, the whole surface being blotched and spotted with rich red-brown markings. The surface-markings may be small and pretty evenly distributed over the whole egg, or form a sort of zone round the large end of it, or, as is sometimes the case, may consist of only two or three tiny specks of colour, the grey and brown underlying markings being much larger and more conspicuous. In some specimens the surface-blotches are very large, and shade away into the underlying marks,—these are by far the most handsome specimens. The eggs vary but little in size and shape, from 2·2 to 2·0 inches in length, and from 1·6 to 1·5 inch in breadth; they cannot easily be confused with those of any other of our British Gulls.

Young in down are pale grey on the upper parts; the head and under parts are pure white slightly tinged with pale brown on the flanks.

As soon as an intruder appears at the colony the air is filled with birds, anxiously calling with their plaintive cries; they are, however, much more timid than is usual with the gulls, and rarely swoop at the intruder's head as most of the other gulls do. They are extremely tame when the eggs become highly incubated, and may be easily approached within a few feet. I was once lowered on a rope to photograph two birds on their nests at St. Abb's Head, and they paid no attention to me, though I dangled on the end of the rope within nine feet of them, and went through the usual photographic evolutions with a large focussing-cloth.

PLATE I

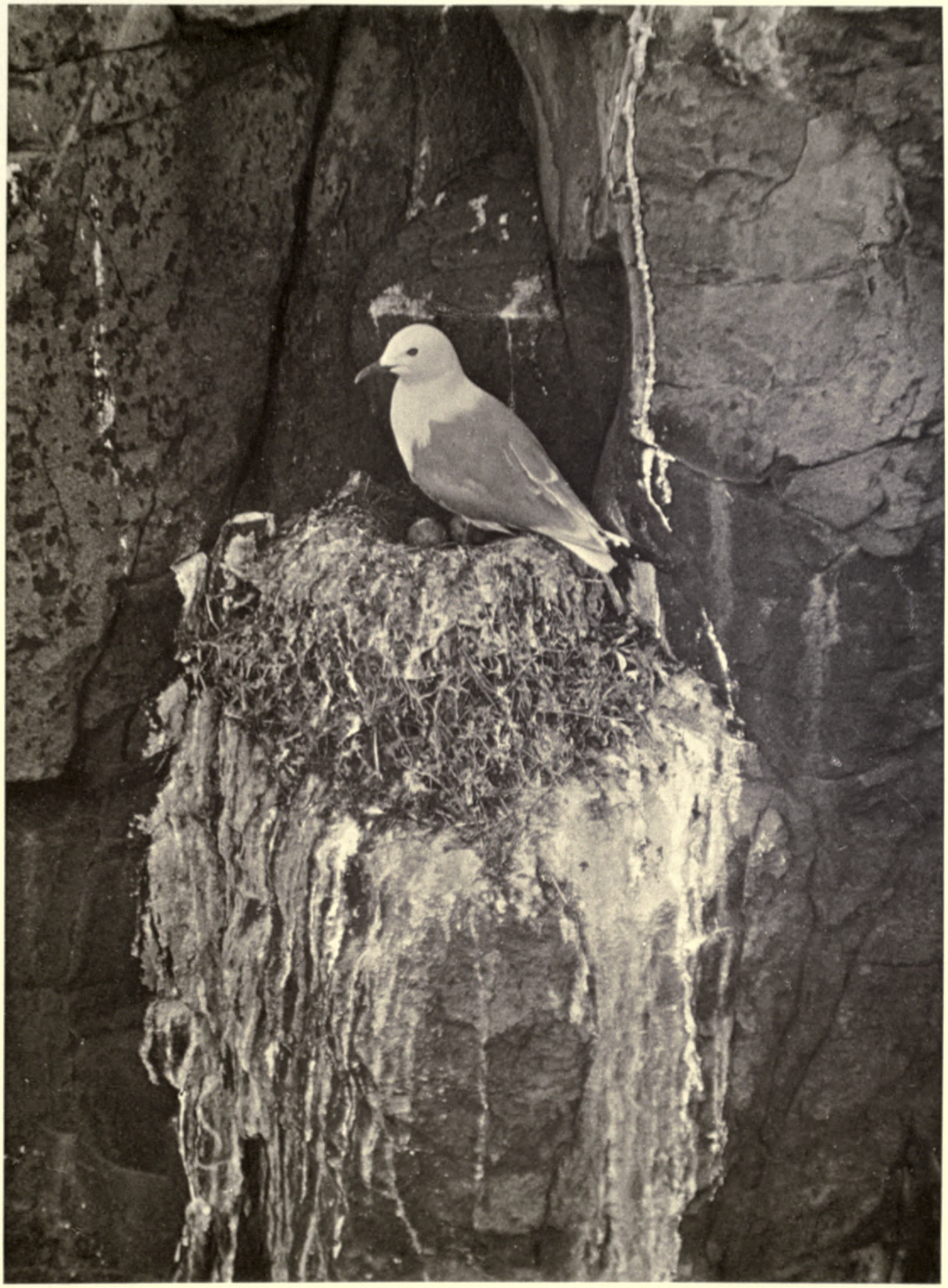
KITTIWAKE GULL. *Rissa tridactyla*

June 10th, 1893.—After great difficulty in lowering myself and my camera on to a narrow ledge of rock in a deep chasm near the 'Pinnacles' on the Farne Islands, I succeeded in taking this photograph of a Kittiwake on her nest on the opposite side. As there was barely room for me to stand on the ledge with my back against the rock, it was quite impossible for me to set up my camera on its legs, so I had to hold it in my hands for a two-and-a-half second exposure, which is not a very easy thing to do.

The bird was exceedingly tame, as far as alighting on the nest was concerned, but she would not settle on to her eggs, and I had to be contented with a photograph of her sitting on the edge of the nest, and took four plates of her in various positions.

The nest was made of little bits of turf, and the soil adhering to the roots of the grass and sea-pink, of which it was composed, had been worked into a regular concrete with the damp and trampling of the birds' feet. It was lined with tiny pieces of sea-campion, dry grass, and a few feathers, and contained three very beautiful eggs, which were evidently pretty nearly hatching, as the bird was extremely reluctant to leave the nest.

Just below this nest was another, containing newly hatched young birds, and the parents were very busy feeding them with pieces of fish, which they disgorged on the side of the nest, and gave in little pieces to them. I was very anxious to get a photograph of this nest with the old birds feeding their young, but unfortunately the light was not strong enough so far down in the chasm, and my plates were all hopelessly under exposed.



KITTIWAKE GULL. *Rissa tridactyla.*

1/3 NATURAL SIZE.

WATERHEN

Gallinula chloropus

THE Waterhen, or Moorhen, as it is often called, is generally to be seen about the shores of our lakes, streams, and ornamental ponds. It is a very common and widely distributed resident throughout the British Islands, and in large ponds full of reeds and overgrown with water-plants, large numbers of these birds may often be seen swimming together, splashing through the water after each other, or swimming along in their curious bobbing manner, catching the insects off the rushes and water-plants.

It is a very pretty sight to see these graceful birds walking gingerly along the top of the floating weeds or dense masses of the leaves of the water-lily. When suddenly alarmed on the water, the Moorhen usually dives at once and swims with great rapidity under water to the nearest cover of reeds or water-plants; there it will often lie hid for a considerable length of time with only its bill projecting above the surface. Like the Grebes, the Moorhen will dive with its young, holding them under its wing and conveying them to a place of safety. In severe winters the Waterhen leaves its haunts, which have been completely frozen up, and betakes itself to some farmyard or poultry-pen where it contrives to find a living till thaw sets in and it can return to its usual quarters. On such occasions they are very tame, and I have often seen them in a poultry-yard feeding among the hens quite unconcernedly.

The Waterhen is one of our early breeders, especially in a mild early spring. I have taken their eggs, highly incubated, from a pond near Callander as early as the 6th of April. It frequently rears two, and sometimes three, broods in the year, the last brood being sometimes very late, as I once found a nest containing four perfectly fresh eggs at the Lake of Monteith on the 27th of July; possibly, however, the second brood had been destroyed.

The nest is not remarkable, as a rule, for its neatness of construction, being very often little more than a mass of reeds mixed with rank grass and

rushes, but generally much more carefully finished in the centre. It is often found concealed among the tall reeds on the edge of the water, sometimes in the centre of a tuft of rushes, where the birds often drag down the surrounding spikes and form a sort of dome to hide the nest, and, perhaps most frequently in some patch of reeds or iris quite surrounded by water. In districts subject to inundation the nest is often built on a fallen tree at some height from the ground — even in the top of a Pollard willow, or on the flat branch of a large fir-tree.

Perhaps the most curiously situated nest I have come across was in a huge old silver fir beside a small pond. About thirty feet from the ground the tree divided, and formed a large crevice, usually frequented by a pair of owls; but on my climbing up on one occasion, instead of the owl flying out as I expected, out came a Waterhen, and on looking into the crevice I saw her nest with nine eggs. I spent some time watching the nest when the eggs were hatching, and saw the old birds carry down seven of the chicks, one by one, clutched in their long toes. They always dropped them into the water from a few inches above the surface, and flew along the top of the water for some distance before alighting, to turn round and watch for a few seconds before swimming up to the young one with bobbing head and jerking tail.

The Waterhen usually slips quietly away from her nest at the approach of danger, generally pulling some of the lining of the nest over the eggs to conceal them, but if suddenly alarmed she flies off from the nest with her long legs hanging down, and drops clumsily into the nearest cover, where she swims restlessly about, uttering her alarm-notes, which may be represented by the syllables '*Kik-ik-ik-kek-ek-ek*,' or sometimes '*Kerk-kerk-kerk*.'

The number of eggs laid varies from four to ten, sometimes even as many as twelve. They are pale buff or pale reddish brown in ground colour, spotted with reddish brown and grey under-markings. The spots are never very numerous, and vary in size from small peas to tiny specks; some specimens are much more sparingly marked than others, but the ground colour is never very much hidden, even in the most richly marked specimens. Very often one egg in the clutch is much more handsomely marked than all the others, and there is often great disparity in size even in the same clutch. They vary in length from 1·9 to 1·4 inch, and in breadth from 1·3 to 1·1 inch. They may be distinguished from the eggs of the Corncrake by their larger size and heavier shells.

Young in down are black.

PLATE I

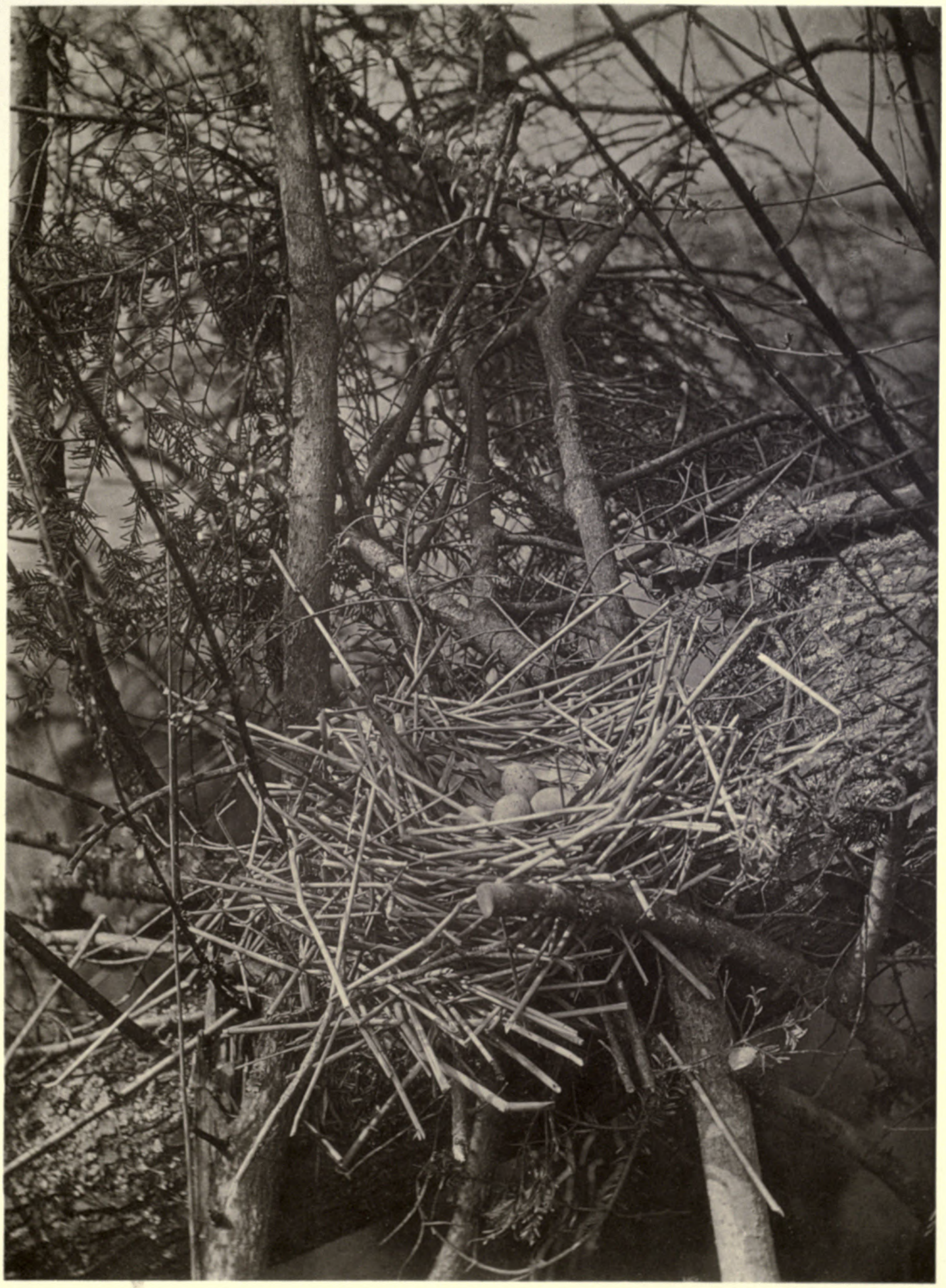
WATERHEN. *Gallinula chloropus*

May 4th, 1895.—This nest was placed in a fallen tree beside a small loch near Doune, Perthshire. It was fully eight feet above the surface of the water, and was built on the trunk of a blown-down willow-tree, between two branches of a large silver fir which had fallen alongside of it. The nest was entirely constructed of dry, dead reeds, and was lined with dead sedges and dry reed-leaves, and contained four fresh eggs.

The bird came to and from the nest, along the sloping trunk of the tree, stepping nimbly over the branches of the silver fir which lay across its path; she was so quick and silent in leaving the nest that I only once got a glimpse of her as she ran down into the water and disappeared into the reeds, though I stole up very cautiously on two or three occasions.

The first chick was hatched twenty-two days after I discovered the nest with three eggs in it. The full complement of eggs was nine, one of which was quite different from the others, and a remarkably beautiful specimen. It is, however, not an unusual thing to find one egg in a Waterhen's nest with much larger and more brightly coloured markings than all the others; I have taken three very handsome specimens on different occasions from quite ordinary clutches.

I stumbled suddenly on a stump close to this nest shortly after the young were hatched, and disturbed the family party, which was quite close; the old bird dived immediately with one of the chicks held under its wing, while the rest of the little black dots scuttled away through the water as hard as they could to the nearest cover, where I heard them 'peep-peeping' away to each other.



WATERHEN. *Gallinula chloropus.*

Plate I.

1/4 NATURAL SIZE.

UNIV.
CALIFOR

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CALIFORNIA

PLATE II

WATERHEN. *Gallinula chloropus*

May 27th, 1893.—This Plate was taken from a very pretty nest beside a tiny pool in a swampy piece of ground on the shores of the Lake of Monteith. It was beautifully concealed among the flowering rushes and cotton-grass, and was built of pieces of fresh rushes and lined with green grass and leaves of the meadow-sweet, against the dark green of which the five pale-buff red-spotted eggs made a lovely contrast.

Both birds were at the nest when I came upon it, and ran away among the rushes to the water's edge, where I heard them calling to each other. When I visited the nest about a fortnight later it contained ten eggs, and two of them were chipped, and next morning as I rowed past the spot in my boat I saw nine little downy black dots running nimbly about on the top of the water-lily leaves among the reeds, catching insects, while the two old birds swam about close at hand, bobbing their heads and jerking their tails with pride.

This pair reared a second brood beside the same pool, in a new nest not ten yards from the one in which the first brood was hatched. I discovered the nest when there were only three eggs in it, on the 9th of July. Only five eggs were laid, and the nest was destroyed by some vermin, as I found two of the eggs lying sucked within a few feet of the nest. This second nest was also entirely composed of green rushes and bits of meadow-sweet, and lined with green grass.



WATERHEN. *Gallinula chloropus.*

2/3 NATURAL SIZE.

WILLOW WREN

Phylloscopus trochilus

THE Willow Wren is the most abundant and most widely distributed of the warblers throughout Great Britain, and may be seen during the breeding season in almost every plantation or wood in the British Islands.

It is one of the first arrivals in spring, and its little song may be heard in the woods as early as the second week in April. It is exceptionally fond of copses of oak and birch with a good undergrowth of bracken and ferns, but there are very few places where it is not to be seen hopping from twig to twig diligently searching for insects. Far up the hill-side, where the burn dwindles to a mere ditch, with a few dwarf birches struggling for existence among the rocks and peat, we find the Willow Wren singing as gaily as ever, and it is just as busy hunting insects or uttering its little song among the shrubs in the ornamental gardens of most of our towns.

The Willow Wren is a very restless bird, and is always on the move, always hunting for insects, sometimes hanging upside down to examine the under side of a leaf, or taking a little flight after some fly on the wing, catching it with quite an audible snap, or hovering under some branch to catch the insects which lurk in the crannies of the bark. Every now and again during its search for food it stops to utter its simple song, a few notes uttered in a descending scale, as it were a series of different pronunciations of its call-note, '*Who-it*,' its little throat quivering with the exertion.

The Willow Wren commences the work of nest-building early in May, and full clutches of its eggs may be taken by the middle of the month. The female sits very closely, and on being disturbed flutters along the ground with outspread wings and tail to some bush near at hand, where she utters her alarm-note, a plaintive '*teŭ-teŭ-tēu*.'

The nest is a very difficult, almost impossible, one to find,—it is so carefully hidden, and except by putting up the sitting bird or watching her drop down beside it, defies the most careful search. I remember being very

nearly beaten by one nest. I knew to within a few yards of where it was, in a small patch of oak and birch, with oak leaves thickly strewn over the ground, which was covered with small ferns and tufts of grass, but find it I could not, even with the most systematic searching. I tried approaching cautiously and trying to put up the sitting bird, but my feet made such a noise among the dry dead leaves that she always hopped away along the ground before I saw her, or slipped off the nest when my back was turned. I got myself hidden a little way off, and watched her for three-quarters of an hour hopping about among the twigs and small bushes, quite unconcernedly, as if she had not any nest at all; but at last she dropped suddenly to the ground and did not fly up again, so I gave her two or three minutes' grace and then walked quietly up. She got up when I was still some six yards distant, and I took then three or four minutes to find the nest. It was almost entirely hidden among the dead leaves and grass at the base of a small mound, and was built in a hollow in the ground under an overhanging clod of moss-covered earth. There was very little nest, but the hole was lined with a little moss, a few bits of dry grass and a quantity of feathers, and contained seven very highly incubated eggs.

The Willow Wren's nest is very neatly constructed. It is nearly domed over, but the eggs are always visible, as the entrance is sloped back towards the top. It is rather loosely built outside with dry grass, moss, and dead leaves, according to the surroundings, and lined carefully inside with fine grass-roots, horse-hair, and a profusion of feathers. It is usually artfully concealed among the grass at the root of some large weed, tuft of grass, or broom bush. A very favourite place is where a dead branch has been grown over with rank grass, and dead leaves, blown by the wind, have lodged among the twigs.

The number of eggs laid varies from five to eight. They are white in ground colour, spotted or finely peppered with pale reddish brown; they have a delicate creamy tinge when perfectly fresh, but lose it when blown or highly incubated. Some specimens have the markings nearly all at the large end, where they form a sort of irregular zone; others are very finely peppered all over, or, more rarely, the spots are few and rather large. They may be distinguished from the eggs of the Chiffchaff or Wood Wren by the paler colour of the markings, and from those of the Tits by the site and shape of the nest. They vary a good deal in shape as well as in size, some being long and narrow and others nearly round. They vary in length from ·72 to ·55 inch, and in breadth from ·50 to ·44 inch.

PLATE I

WILLOW WREN. *Phylloscopus trochilus*

May 24th, 1895.—Returning from fishing one afternoon, I almost stepped on to this nest. The little bird fluttered away from my very feet, and I saw the nest almost immediately. It was built in a crevice among the roots of an old birch stump which had begun to sprout again, and was almost entirely made of dry grass profusely lined with feathers, and some tiny pieces of rabbit fur, and contained seven fresh eggs. The bird was remarkably tame, and fluttered anxiously about among the twigs and dead stumps within a few feet of me all the time I was examining the nest.

I had some difficulty in finding it when I returned to photograph it next day, though I had carefully marked it, as the immediate vicinity of the nest was littered with dead oak leaves. Now, to my certain knowledge there were no oak leaves there the day before, and there was no tree of that kind within forty yards of the nest, neither was there any wind during the night to blow them there. I am therefore very much inclined to think that the birds had endeavoured to alter the appearance of the surroundings in order to conceal the nest and to prevent my finding it again, and had carried the leaves there themselves. I have an instance on record of a Blackbird's nest which was adorned with a long strip of lace firmly woven into the side of the nest, making it quite conspicuous; this brought frequent visitors, who generally managed to frighten off the sitting bird during the inspection of the nest. On the fourth morning after the first discovery of the nest, the lace was observed hanging in the branches of a fir-tree some fifty yards from the nest, and the bird was sitting on her five eggs as usual.



WILLOW WREN. *Phylloscopus trochilus.*

½ NATURAL SIZE.

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SANDWICH TERN

Sterna cantiaca

THE Sandwich Tern is a regular summer visitor to the British Islands, breeding in a few favoured localities, of which perhaps the Farne Islands, off the coast of Northumberland is the best known. In Scotland it has still a few breeding-places, though it is much molested. It frequents at least one county in Ireland during the nesting season.

The Sandwich Tern is essentially a sea-bird, and is rarely seen any distance from the coast. It is a very wild and shy bird, and seldom permits itself to be approached within gun-shot except at its breeding-haunts, where it can be best observed. Its powers of flight are magnificent, and it may be seen in the wildest storms hovering in the air above the surf before pouncing down upon some luckless fish which has come too near the surface. Its food consists almost entirely of fish, which it catches in the same way as the Solan Goose, dropping like a stone on them from some height, with almost closed wings, and raising quite a splash as it strikes the water, invariably reappearing on the surface with its prey held crosswise by the back of the neck.

The cry of the Sandwich Tern is not easily forgotten when once heard; it may be represented by the syllables, '*Kēē-ow-wĭck*,' or '*Kĕrrĕrr-rĕk*. It has also a call-note resembling the '*Krēē*' of the Common and Arctic Terns. During the breeding season they are very fond of chasing each other at some height in the air, keeping up a continuous chattering call as they wheel and swoop after each other.

About the middle of April the Sandwich Terns arrive at their breeding-place, where they spend a few hours daily before departing to their feeding-grounds, lengthening their stay as the nesting-time approaches. At this time they will desert their nesting-haunts if subjected to any anxiety or even slight

disturbance, and seek out some quieter spot. Eggs are usually laid about the last week in May, a little earlier if the season is fine. The Terns do not trouble themselves much about a nest,—a slight depression in the sand or gravel, lined with a straw or two, or perhaps a feather, is quite sufficient to receive the eggs.

I had the good fortune to discover a large colony of these birds on the Bar off the Culbin Sands in Morayshire, in 1887, and to quote from my Journal:—'*June 2nd*, 1887.—At ten o'clock I started to go to the Bar off the Culbin Sands, and after I had crossed the sandhill and come in sight of the Bar, I found that the tide would not be out for some time. I got rather tired of waiting, so I determined to wade, wet or no wet. After I had progressed about a hundred yards, most of the way above my knees in water, I suddenly saw a Tern rise from some bent on a roundish island with steep-sloping banks of gravel all round it. I thought it was a very large bird, so I whipped out my glasses and looked through them. "That's a Sandwich Tern," I exclaimed, "and there must be eggs there." So, regardless of wet, I dashed on through the sea, often up to my waist, to the great astonishment of some fishermen who were digging bait, and reached the Bar. There, before my eyes, was the long-wished-for prize: one, two, three—dozens of nests of the Sandwich Tern, none of them with more than one egg, however.

'The nests were mere scratches among the dried seaweed and sea-campion growing down to high-water mark, some of them among the bare stones, others on the sand, but none farther than four feet from high-water mark. Most of the eggs were laid with the small end pointing to the middle of the nest, and, curiously enough, most of the eggs were pointing with the small end to the north-east, as if all the birds had been sitting with their heads to the wind when they laid them. I counted thirty-two nests, and twenty of them had one egg in each.' This colony, however, was not to be found on my return next year, but I saw two nests on the gravel banks at the mouth of the Findhorn.

In 1895, when I visited the Farne Islands, I found two small colonies of Sandwich Terns on the Wide-opens. The nests were placed on the short grass between the masses of sea-campion and nettles which cover the islands, they were simply scratches in the ground, with a few small bits of campion or grass as lining, often without any at all. The main colony was on the adjacent island, which may be reached on foot at low tide, if the ornithologist does not object to a few somewhat sudden and painful falls, as the intervening stretch of slimy and seaweed-covered boulders is most treacherous to walk on.

The nests here were placed on the gravel among the dry seaweed and drift-wood above high-water mark.

The eggs of the Sandwich Tern are very handsome. The ground-colour varies from buffish brown to pure white, cream colour being the commonest; there is also a faint olive-green variety, but this is rare. The surface spots are dark brown, sometimes a purple black or rich red brown. The under-markings, which are generally very conspicuous, are pale grey or greenish purple. The surface-markings are almost endless in their variety of size, shape, and colour; some specimens are covered with delicately shaded streaks, lying diagonally to the longer axis of the egg, others have most of the marks at the larger end, forming a zone, and some have curious scrawling marks all over them. Perhaps the most handsome variety is that on which a huge fantastically-shaped blotch covers nearly half of the entire surface. They vary in length from 2·2 to 1·8 inch, and in breadth from 1·5 to 1·2 inch, and are not easily confused with the eggs of any other British bird.

Young in down are pale grey on the upper parts, speckled and mottled with greyish black, and pure white on the under parts.



PLATE I

SANDWICH TERN. *Sterna cantiaca*

June 10*th*, 1893.—The nest depicted in the Plate was taken on a very interesting expedition to the Farne Islands, off North Sunderland. We drove down and engaged a boat from Cuthbertson to take us across. There was very little wind, and we had to row most of the way, which was rather tantalising, as it was a lovely bright day, and I wanted to do as much as possible in the time.

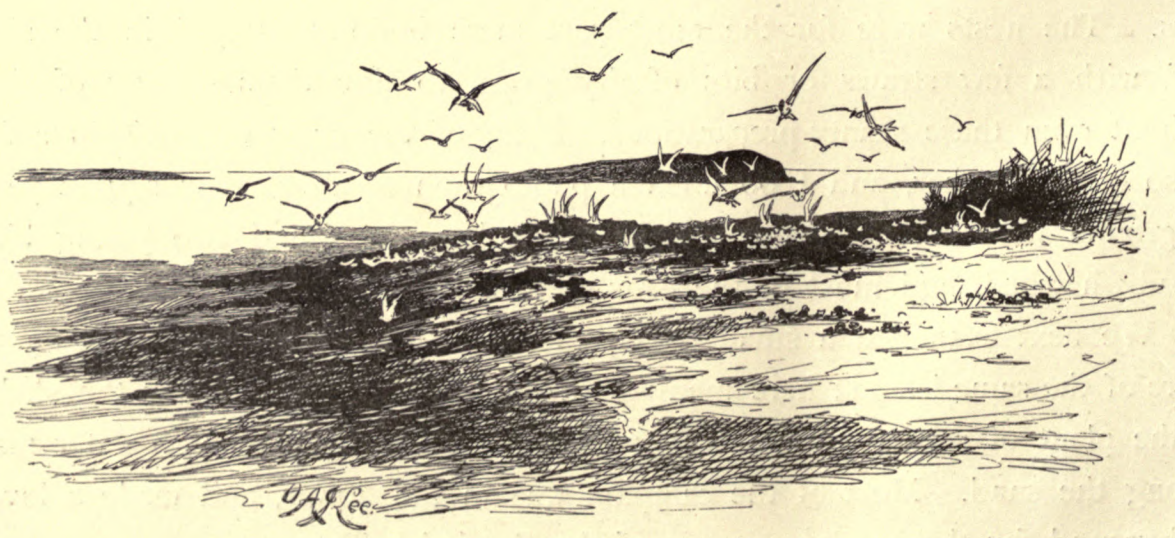
The first island we visited was the Inner Wide-open. On our way there we had seen very few birds, only a few Gulls lazily swimming about or basking in the sun, but as we approached we could see that the ground was covered with hundreds of Terns, and when we landed they rose in thousands, screaming in the air above our heads, and looking like a regular snowstorm. We soon came upon a colony of Sandwich Tern nests on the short grass among the huge masses of sea-campion and nettles near the middle of the island. Some of these patches were more than two feet high, and formed a splendid shelter for the birds; I counted seventy-two nests, all containing eggs. The nests were for the most part mere hollows scraped in the short turf, with a few straws or bits of dry grass to line them,—many of them without even these scanty preparations. Many of the nests were within a foot or so of each other, and I obtained a photograph of about four square yards of ground with six nests on it. In this colony we found two young birds already hatched, and most of the eggs were chipped.

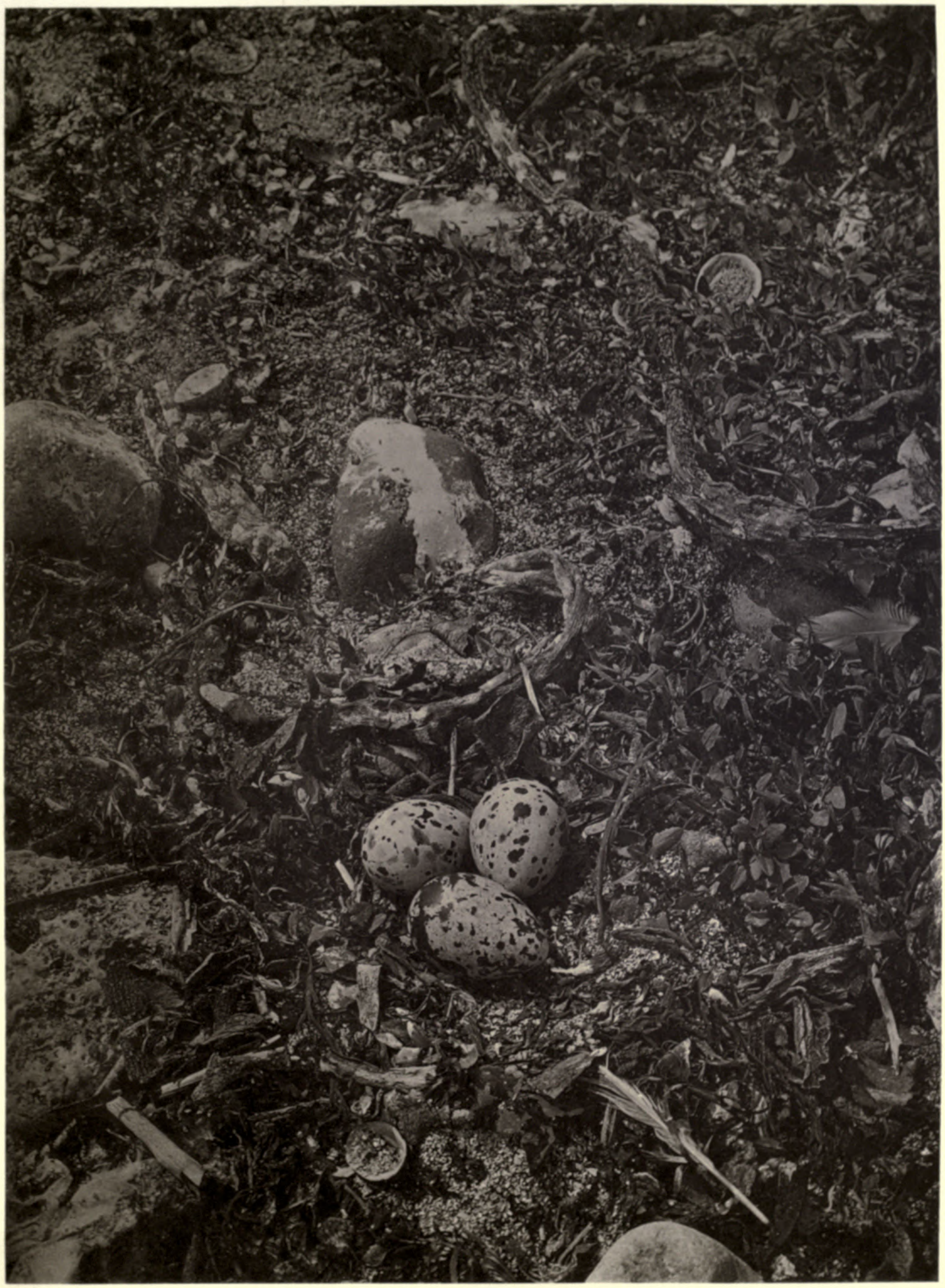
We next examined a small colony of some twenty or thirty nests on the shore of the same island; here many of the nests were placed under the shelter of the plant of sea-campion, which grew quite close down to high-water mark among the sand. Most of the campion was in full flower, and made a lovely background for the handsome eggs of the Sandwich Tern.

The largest colony of this species on the Farne Islands was on a small, low island, joined to the inner Wide-open at low tide by a narrow ridge of the most slippery seaweed-covered boulders I have ever seen, during the crossing of which I had two sudden and somewhat painful falls. On reaching the other

side a perfect cloud of screaming Sandwich Terns rose to greet us, and on a mound of gravel and sand covered with bents and dead seaweed was the great colony. There must have been over two hundred nests, all quite close together, most of them being mere scratches in the ground, sand, or gravel, without lining of any sort. The eggs were frequently laid close to some large stone or piece of driftwood. They were usually three in number, sometimes only two, and we saw one nest with four in it. The Plate annexed is from one of these nests.

After I had taken as many photos as I required we withdrew and watched the birds returning to their nests. They were very bold, and came in quite close to us and alighted at their nests not twelve yards off. I tried several plates of them on the wing, but though my shutter was working at a twentieth of a second it was not nearly fast enough to bring out their wings with any distinctness. Many of the birds had performed two beats of their wings during the exposure!





SANDWICH TERN. *Sterna cantiaca.*

1/2 NATURAL SIZE.

UNIV.
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UNIV.
CALIFOR

SHELD-DUCK

Tadorna cornuta

THE Common Sheldrake is a resident in the British Islands, and is distributed more or less abundantly on all the suitable parts of our coasts. It is, however, much more abundant in little-frequented districts, owing to the way in which it is persecuted in many localities. It wanders far from its usual haunts during late autumn and winter, and is then much more universally distributed.

It is exclusively a marine bird in most parts of the country, and frequents the sandy portions of our coasts, especially where the sand is blown into hills and covered with bents. It is rather a shy bird, even during the breeding season, and remains more or less gregarious all the year round. Its flight is slow and laboured, rather more like that of a goose than a duck. It is somewhat larger than a Mallard, and is one of our most handsomely plumaged ducks, the white, black, and rich chestnut of its plumage forming a pleasing combination. On land they walk with ease like a goose, and resemble that bird in their habits to a large extent. They are fond of frequenting the grass fields in early morning, not so much for the sake of the young grass shoots as for the slugs and worms which they devour greedily.

The call-note of the Sheldrake is a harsh '*quāāck*,' not unlike that of the Mallard. During the breeding season the male has a clear, rapidly repeated whistle, and his alarm-note to his mate is a deep '*Kow-kow-kow*.'

The food of the Sheldrake consists of seaweeds, molluscs, and various kinds of marine animals which it obtains on the sea-shore; it also frequents the pools of brackish water, and little ponds of fresh water near the coast, where it procures various water-insects and the buds and roots of aquatic plants. It does not dive for its food, but may be seen in the shallow water head downwards, with only its tail visible, feeding on the bottom.

The Sheldrake is an early breeder when it is not disturbed, and eggs may often be found by the end of April; but in places where it is subjected to much molestation, and the first laying is removed, fresh eggs may be taken as late as the second week in June. The Sheldrake always breeds in a burrow, never in the open, so far as is known, generally choosing the deserted burrow of a rabbit, sometimes driving out the occupant. It is not an uncommon thing to find a Sheldrake's nest in a burrow still occupied by the rabbits, though the nest on these occasions is usually in some *cul-de-sac*, and not in the main tunnel. The nest is usually from four to ten feet from the mouth of the hole, which is widened out into a chamber to receive the eggs. In places where rabbit-holes are scarce, the birds frequently excavate a burrow for themselves; it is generally more or less crooked, as if the birds followed the softest part of the soil, and varies from five to ten feet in length, with a large chamber at the end, in which the nest is placed.

It has been said that the male does not assist the female either in the incubation of the eggs or in the construction of the nest. I think, however, that this is open to doubt. I have taken both old birds from a burrow in which the nest was barely completed; I watched the duck go down the hole with her bill full of dry grass and promptly blocked up the orifice. On excavating the burrow, which was some five feet long and quite near the surface, I found both the duck and drake in the nest-chamber, which was all ready for the reception of the eggs.

From seven to twelve eggs are usually laid, but on some occasions as many as sixteen have been found, and the number is often increased by the judicious removal of the eggs as they are laid, care being taken to leave three or four always in the nest. They are white, slightly tinged with cream colour, with a somewhat smooth texture, and vary from 2·8 to 2·4 inches in length, and from 2·1 to 1·8 inches in breadth. The nest-chamber is slightly lined with a little dry grass and moss and a profusion of light-coloured down, and on this the eggs are laid. The duck always covers her eggs carefully with the down before leaving the nest, incubation lasting from twenty-four to twenty-six days. The down is very pale in colour, as is usually the case with ducks which breed in holes, and is a beautiful lavender-grey, mixed with little white tufts and a few chestnut-tipped feathers.

Young in down are dark greyish brown on the upper parts and the forehead, sides of the head and neck, wings, rump, scapulary regions, and under parts are pure white. The bill, legs, and feet are flesh-coloured.

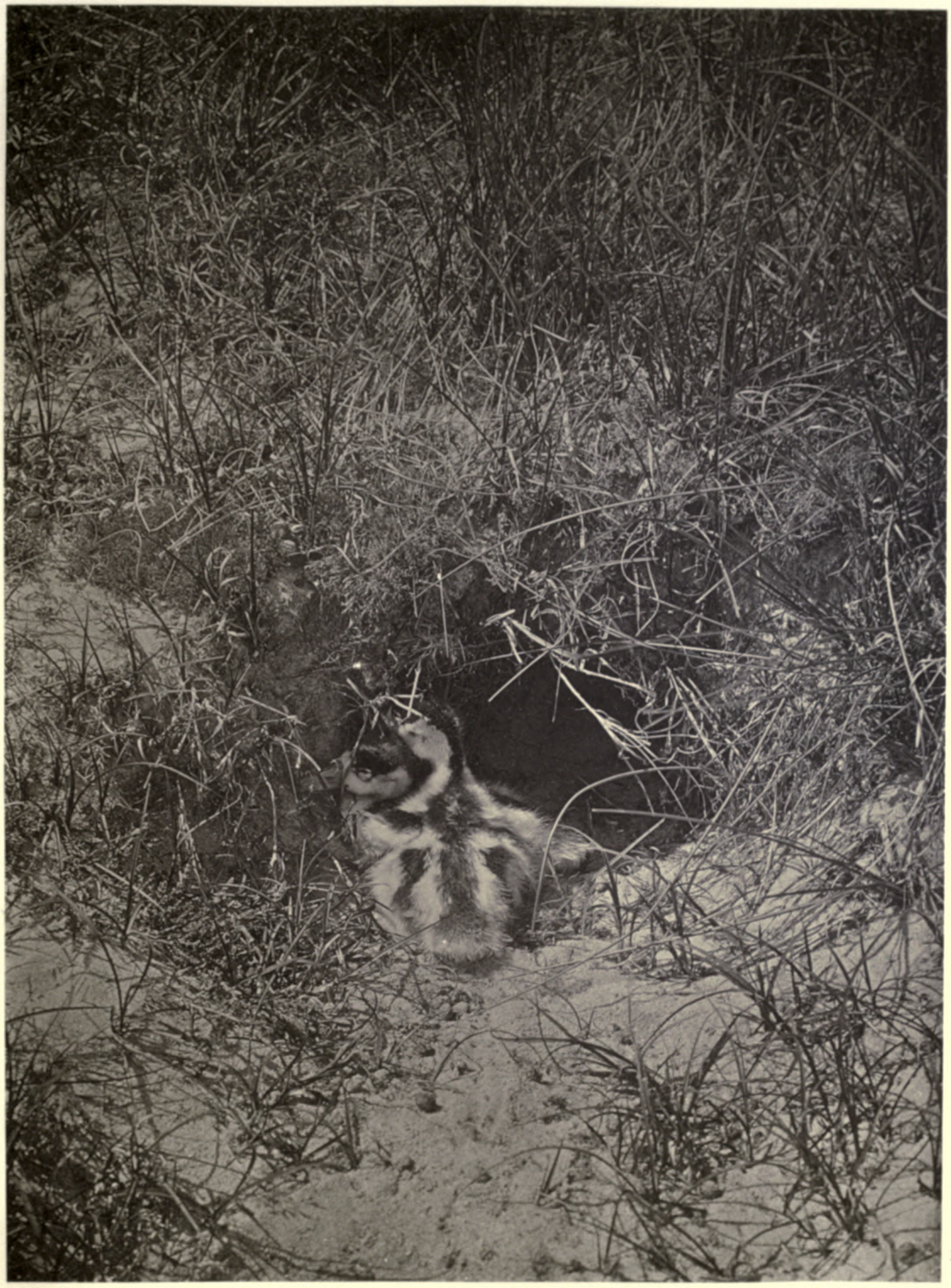
PLATE I

SHELD-DUCK. *Tadorna cornuta*

June 19th, 1893.—Coming along the Culbin Sands one afternoon with my camera, I saw a Sheldrake with her brood of newly hatched young ones making for the sea. When she caught sight of me she at once led them back to the burrow where they had been hatched, and disappeared down it with them. The old drake meanwhile flew round and round me whistling and uttering a deep '*kow-kow*.' I stole quietly up to the hole; two of the ducklings were crouching at the mouth of it, and I could just see the white breasts of some of the others far down inside. I cautiously set up my camera and got a very good photograph of them.

I then withdrew to some distance and lit my pipe, watching through the bents from the top of a small sandhill. In about a quarter of an hour the drake came flying round and round whistling and calling to his mate. After seeing that all was apparently safe he alighted about ten or twelve yards from the hole and began running backwards and forwards calling. Presently a little duckling ran out of the hole, then another and another, till they were all out, the duck appearing last, shaking the sand from her plumage. The whole family then made off to the sea, and I watched them disappear over a large sandhill in the distance, leaving their tracks behind them in the soft sand.

In 1887 I carried home nine young Sheldrakes from the Culbins and put them on an ornamental pond near the house. A Mallard had brought out her young then, but they had all been killed by the swans, who, having a nest, jealously guarded the pond from all intruders. My astonishment was great, when I visited the pond next day to see how the Sheldrakes had fared, to observe the old Mallard swimming along beside the overhanging bushes with all the little Sheldrakes in a bunch following her. They were much too smart at diving for the swans to catch them, and the Mallard tended them till they could fly, when they disappeared one by one, except a single individual who had been pinioned.



SHELD-DUCK. *Tadorna cornuta.* *Plate I.*

1/3 NATURAL SIZE.

UNIV. C
CALIFOR

PLATE II

SHELD-DUCK. *Tadorna cornuta*

June 5th, 1893.—This photograph was taken from a nest which we dug open on Tents Muir, Fife, to show the eggs, as they lay in their bed of down. We saw the tracks of the birds in the sand at the mouth of the rabbit-hole, and concluded that it must contain a nest. We had no proper implements to dig with, and had to work a passage along the line of the hole with walking-sticks, scraping the loosened sand away with our hands. On reaching the nest-chamber I found that the old bird was on, but she made her escape by another hole. We spread a handkerchief over the eggs and down, while we removed the part above the nest, to prevent the loosened sand from covering everything up, and I took two photographs of the down and eggs.

The nest was about five feet from the mouth of the hole, and about two and a half feet from the surface of the ground; it was made of a few scraps of bent and dry grass and a large mass of down, among which the eggs were almost hidden. This nest was almost a mile from the sea in a very dry part of the moor. We did not see any of the Drakes in the vicinity, though we found three or four occupied burrows.

On the Culbin Sands in Moray I used to see the drakes coming between five and six o'clock in the afternoon to escort the ducks to the feeding-grounds. They would fly round and round uttering their curious whistle, and calling to the ducks, who always joined them after a few minutes, and flew off with them. I used to wonder how the sitting bird could hear her mate calling, when she was so far down the hole.



SHELD-DUCK. *Tadorna Cornuta.* *Plate II.*

1/4 NATURAL SIZE.

UNIV.
CALIFOR

AMONG BRITISH BIRDS IN THEIR NESTING HAUNTS

ILLUSTRATED BY THE CAMERA

BY

OSWIN A. J. LEE

PART III.

LONG-TAILED TIT	2	PLATES.
BLACK-HEADED GULL	1	"
LITTLE GREBE	2	"
GOLDEN PLOVER	1	"
LAPWING	2	"
HERRING GULL	1	"
GREENSHANK	1	"

EDINBURGH. DAVID DOUGLAS.

LONG-TAILED TIT

Acredula caudata

THE Long-tailed Tit is a common and widely distributed resident in England, and is to be found in most woods, plantations, and hedgerows. In Scotland and Ireland it is much more locally distributed, but may often be seen in the more open parts of the woods and in small thickets.

It is perhaps the most interesting to watch of all the Tits, especially during the winter, when they fly along some tall hedgerow or line of trees in a family, eagerly searching each twig and branch for the insects on which they feed. They do not, as a rule, associate with any of the other Tits, but prefer to make their own family party. They are very restless little birds, and seem to be always on the move, perpetually hunting each tree for insects, or catching the gnats as they dance in the air among the branches, during which latter performance they hang suspended in the air, tail downwards, with their little wings moving rapidly, taking their prey afterwards to some twig to devour. They may be seen all over the tree, some up in the top, mere tiny dots, others busily searching the lowest twigs, or even the undergrowth beneath the tree; then they begin to leave the tree one at a time, never very far away from each other, flying along slowly with their curious undulating flight, uttering their call-note '*Zēē-zēē-zēē-krr-kjrrr*,' which once heard is not often forgotten.

When the pairing season sets in, the families of Long-tailed Tits break up and disperse to seek nesting-places among the woods, plantations, and bushes. The Long-tailed Tit—unlike its congeners—builds a nest in the branches of trees or bushes, certainly the most beautifully constructed nest of any bird in the British Islands. It may be found in the fork of an elm-tree or a lichen-covered oak, or in the top of a blackthorn, juniper, or

whin-bush, generally not very far from the ground, but sometimes quite high up; one nest was shown me in Fife, in the fork of an elm full thirty feet from the ground. I found another in Perthshire on the branch of a spruce fir, which must have been fully forty feet from the ground.

The nest is somewhat oval, like that of the Common Wren, the entrance to it being by a hole in the side near the top. It is built of moss and lichens, sewed or woven together with horse-hair and cobwebs, and lined with a profusion of feathers, hairs, and tiny bits of rabbit-fur. On one occasion I was standing within a few feet of a nest in the fork of an oak tree, watching the birds, and was quite surprised to see the amount of trouble they bestowed on the construction of it. One of the little birds arrived with a feather, and disappeared with it into the half-finished nest, the other bird remained sitting on the outside of the nest; the bird inside seemed to be very busy, as the side of the nest heaved convulsively every now and then. Suddenly the one outside seized something which had been thrust through the wall of the nest, and pulled through about half of the feather, which it proceeded to weave into the outside of the nest. I saw this operation repeated many times; sometimes a horse-hair was substituted for the feather, and in that case the weaving took much longer, and was more intricate. The finishing touch to the nest consisted in covering the entire outside of it with tiny bits of bright green moss and silvery-white lichens, which were fastened and woven on to it with cobwebs, until the whole nest was almost indistinguishable from the tree itself. I noticed that the little bird always flew to some distance for the moss and lichens, and never took any from the tree in which the nest was, though it was entirely covered with the same kind of moss and lichen that they were using.

Some of the most beautiful nests I have ever seen have been placed in whin-bushes, and the lovely contrast made by the dark green spikes, bright yellow blossoms, and silver-white lichens on the nest, quite defies description. The nest takes a long time to complete. I have known a pair to work at their nest for nearly three weeks before it was ready for the first egg. As a rule, eggs are not laid before the end of April, and after the female has begun to sit she is fed most assiduously by the male, who brings the food to the nest and feeds her through the hole. Their food consists almost entirely of insects, chiefly small flies, gnats, and tiny beetles. I have seen one chase and successfully capture a large white butterfly, with which it retired to a twig, devouring the body and rejecting the wings, which it allowed to flutter to the ground like scraps of paper.

The eggs of the Long-tailed Tit vary in number from seven to twelve or fourteen; in some cases even more are laid, though such are extremely rare. They are rather less spotted than the eggs of most of the Tits, and are pure white in ground colour, very sparingly spotted with faint light red and still fainter purple grey under-mark. Some specimens are quite spotless. Before being blown they have a delicate pink tinge if quite fresh, but lose it when incubated. *They vary in length from* ·64 *to* ·51 *inch, and in breadth from* ·50 *to* ·41 *inch.*

When the young are hatched the work of feeding them begins, and how these tiny creatures manage to collect food for such a large family is truly wonderful; they are hard at work from dawn to sunset, going backwards and forwards to the nest, never seeming to tire, till the day comes when the young can fly and catch for themselves.



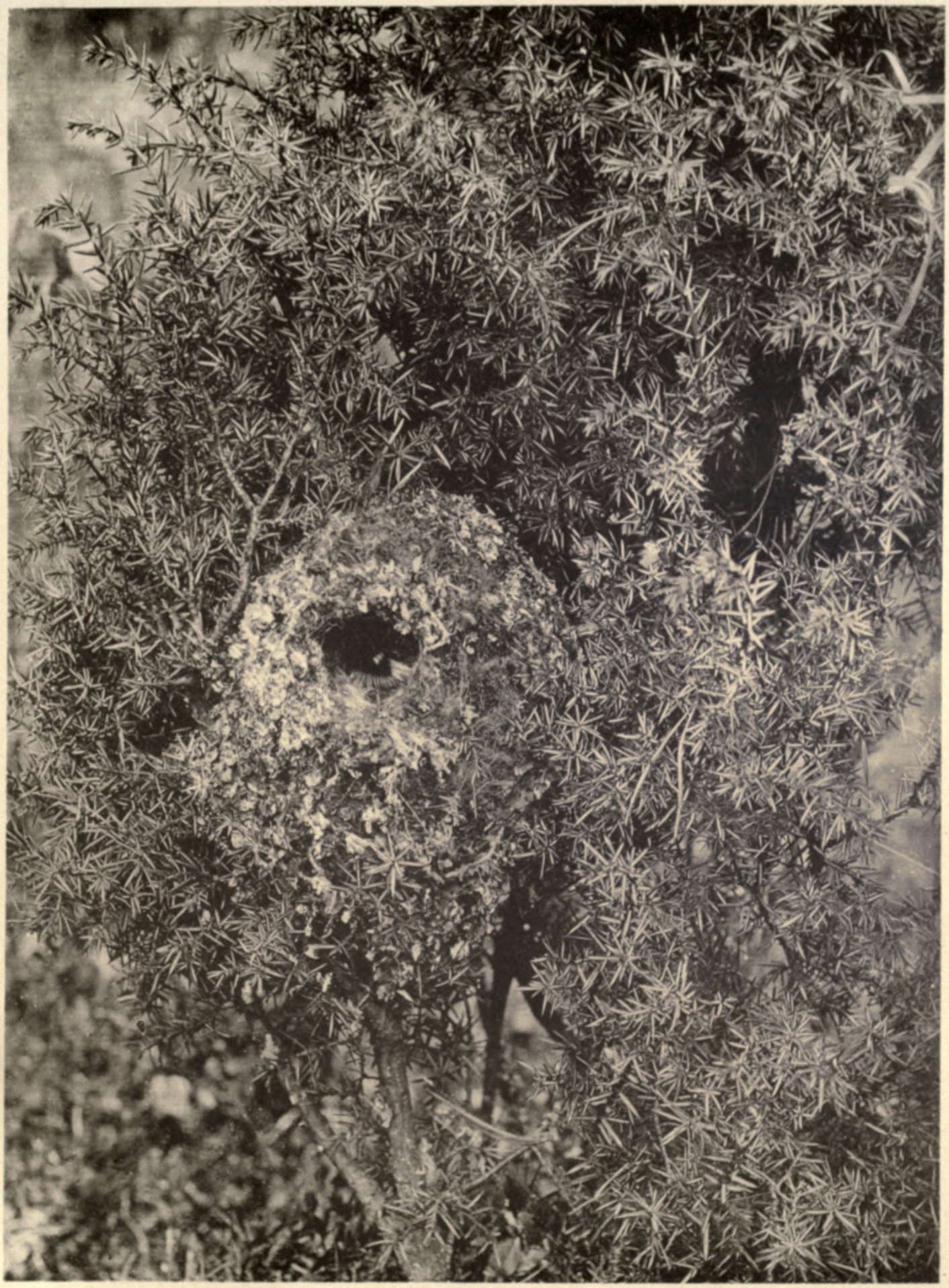
PLATE I

LONG-TAILED TIT. *Acredula caudata*

May 17th, 1895.—This nest was photographed in a small wood close to the river Teith, near Callander, Perthshire. I was watching a Wood Wren to see if I could find its nest when I saw two Long-tailed Tits fly past, each with something in its bill. I hurried after them, and saw them disappear into a fir-tree, where I lost sight of them; in a few minutes I heard them again on the other side of the tree, but they flew away just as I got round. I waited there a few minutes, and they came back and alighted on a small juniper bush, into which they flew one at a time; I went up to it and there was the nest. It was most beautifully built of moss and hair, and was covered all over with cobwebs and little bits of lichens, and lined with feathers, chiefly those of the cock-pheasant.

The nest contained nine young birds, which could not have been hatched more than two or three days, and the old birds were very busy feeding them. After I had taken a couple of photos of the nest, I sat down and watched the two old birds for nearly half an hour, during which time they each arrived with food eleven times, and always together, though one often left the nest before the other was ready to go. One would suppose that this would become monotonous, but the little birds seemed to be quite happy, and flew about collecting food for the young ones, continually calling to each other, and sometimes chasing each other round and round the trees. While feeding the young birds the old one disappeared right into the nest, and stayed in it for about half a minute.

The chief article of food seemed to be a small green fly found on the under side of the birch leaves, as the birds were very busy in these trees, hanging upside down and searching the under side of each leaf; they appeared to collect quite a mouthful of flies before returning to the nest, and always waited for each other.



LONG-TAILED TIT. *Acredula caudata.*

Plate I.

½ NATURAL SIZE.

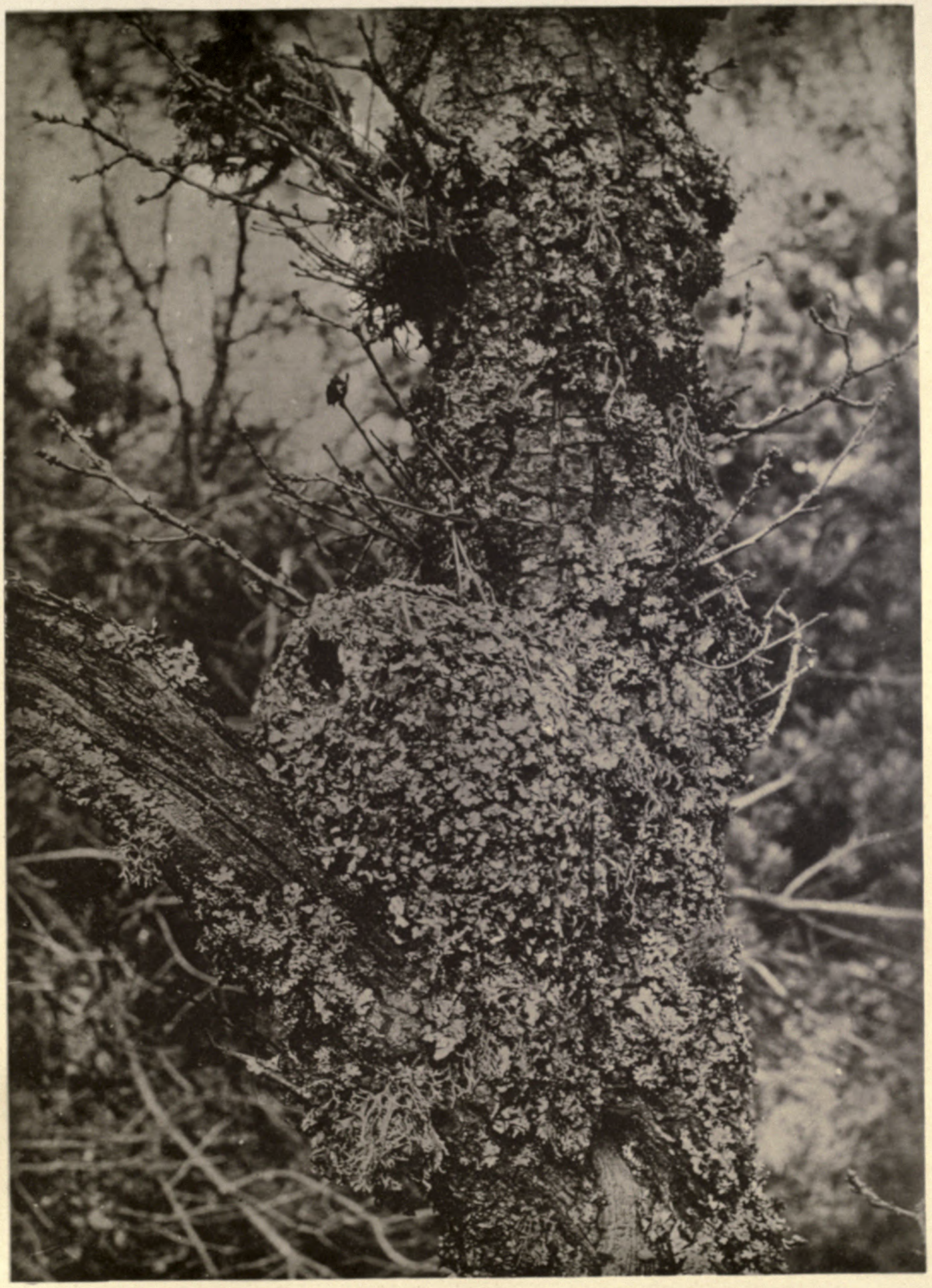
PLATE II

LONG-TAILED TIT. *Acredula caudata*

May 17*th*, 1895.—This Plate was taken from a nest in a small lichen-covered oak in a small copse near Callander. I found it when the little birds had just begun to build it, and they took very nearly three weeks to complete it, though they worked at it incessantly; it was gradually built up from the bottom, and the hole at the top was the last to be finished off. The birds were very tame and allowed me to stand within ten feet of the nest while they worked at it.

Eleven eggs were laid and incubation was commenced before the last egg was laid, the male feeding the sitting bird and attending to her most assiduously. I used to see both birds flying about the bushes and trees in the neighbourhood of the nest about mid-day, chasing each other about among the branches and catching flies, but the female was rarely absent from the nest for more than half an hour at a time, and never went far away. If I approached the nest while she was off, she came back before I had been there half a minute, and scolded me from among the branches of the tree.

On the twenty-third day from the laying of the first egg, there were two little birds out of the shell, and the rest of the eggs hatched during the next two days. After that, the work of feeding the young ones began, and the parents vied with each other in their attentions to the nestlings; they were a very loving couple, and generally kept together during the search for food, chasing each other every now and then and flirting in the most barefaced manner. I saw the whole family party about three weeks later hunting for insects among the trees; the young birds were rather duller in colour than their parents, and their tails were somewhat shorter; otherwise they were almost indistinguishable.



LONG-TAILED TIT. *Acredula caudata.*

Plate II.

½ NATURAL SIZE.

BLACK-HEADED GULL

Larus ridibundus

THE Black-headed Gull is perhaps the most common of its genus throughout the British Islands, and though its colonies do not approach those of the Kittiwake in size, they are far more numerous. It is a resident in the British Islands, and frequents our coasts during the winter, being much commoner on the English and Irish coasts at that season; it is in Scotland and Ireland, however, that most of its colonies are to be found, as it retires inland during spring and summer to the swampy moors and lochs to breed.

The food of the Black-headed Gull consists chiefly of small fish, crustaceans, and marine animals during the winter, but in spring and summer, when inland, they feed largely on insects, small frogs, young trout and parr. They may often be seen following the plough in parties, along with the Rooks, picking up the earthworms and grubs which are turned up; and a very pretty picture they make, with their dainty snow-white plumage gleaming in the sun against the rich brown of the newly turned up soil, as they hover with outstretched wings in a little cloud, resting now and then for a minute to pick up some worm, those behind flying forward over the heads of their companions to a fresh place. They greedily devour the noxious wireworm, and are very useful in destroying many insects which are harmful to the crops.

About the middle of March the Black-headed Gulls have returned to their accustomed haunts inland, and have begun choosing fresh nesting sites or repairing their last year's nests. On Flanders Moss, in the valley of the Forth, where there is a large colony, the birds never remained in the vicinity of the nesting-place at night, during the first two weeks after their arrival, but retired some two miles off to the Lake of Monteith to sleep on the

water; during the day, however, they were always in hundreds at their nesting-place preparing their nests. About the end of April they begin to lay, and at that time a colony of Black-headed Gulls is a very animated sight.

Not long ago I visited a very picturesque colony of these birds on a small loch in South Perthshire. On our approach the whole colony rose in the air amid dead silence, broken only by the rush of thousands of wings; once fairly in the air, however, a perfect Babel ensued, the cries being almost deafening at times. They wheeled in companies and battalions, crossing and recrossing each other till they exactly resembled a whirling snowstorm, while every now and then some bold individual would swoop down within a few inches of our heads, rising again with loud cries of remonstrance at our intrusion. As the alarm subsided a large crowd of birds would alight on the water close to us, every one with its head to the wind, and would rise after a minute or so in a body to wheel round and round us with renewed cries. The birds soon quieted down and returned to their nests, and very conspicuous they looked against the dark green of the rushes and sedges. The nests were placed among the reeds, sedges, and coarse grass growing on some acres of swampy ground round the edge of the loch, and on a treacherous floating island, where the ground caved down beneath the weight of a person walking on it; they were built of reeds, grass, and horse-tail, and were usually flat, untidy structures, often with some large untidy weed, pulled up with the earth still adhering to the roots, and wound round the outside of the nest. All the time we were at the nests the slightest alarm raised hundreds of birds, and we could make the entire colony take to their wings by simply waving our arms. On the slopes of short dry grass round the edges of the loch were many 'preening-places,' such as are found at all colonies of Black-head and other Gulls, the whole grass being trampled flat and whitewashed by the droppings of the birds, while thousands of feathers of all sizes lay around. We noticed a great many dead Gulls lying about, both on the edges of the loch and near the nests, and actually saw one fall from a good height, quite dead. On dissection the bird proved to be very anæmic, and its stomach was perfectly empty, though its body was in good condition, and apparently well nourished. I have seen this happen at two or three colonies of this species, and have never had it satisfactorily explained.

The call-note of the Black-headed Gull may be represented by the syllables '*Krēē-āh-krēē-āh,*' but when they are disturbed at their nests one may hear all sorts of cries, such as '*Krŭ-krŭ-krŭ,*' or '*Kik-kik,*' sometimes '*Kr-kr-kr,*' or '*Kārr-kārr*' and '*Kree-kree.*'

During the severe winter of 1894-95 hundreds of Black-headed and Common Gulls came to be fed in the gardens in front of Eglinton Crescent, Edinburgh, and sat on the railings and garden seats waiting till their food was thrown out; they appeared regularly every morning during the severe frost, and were very tame.

The eggs of the Black-headed Gull vary in number from two to three, four being occasionally found, and are subject to great variation in size, shape, and colour. Sometimes the three eggs in one nest will be quite different, both in colour and in the character of the markings, hence it seems probable that the birds do not always lay all their eggs in the same nest, as one often finds two very dark brown eggs and one very pale bluish green egg in one nest, or two light eggs and a very dark one. The ground colour varies from a pale bluish green to light buff or very dark brown, blotched, spotted or fantastically streaked with rich dark brown surface spots, and underlying spots of greyish brown or purple grey. One variety, which I have often come across, has no surface spots, and shades from very dark brown on the large end to pale greenish blue on the small end; these eggs have usually a very thin, rough shell. Another very handsome and rare variety is entirely of a rich red colour. They vary in length from 2·5 to 1·9 inches, and in breadth from 1·5 to 1·3. Young in down are buff, palest on the under parts, and spotted on the upper parts with dark brown.



PLATE I

BLACK-HEADED GULL. *Larus ridibundus*

May 10th, 1893.—Went across to the colony of Black-headed Gulls on Flanders Moss, near the Lake of Monteith. When we were more than half a mile from the colony we could see the ground white with the sitting birds, and a continual stream of birds passed us on their way to their feeding-grounds, others returning with small trout to feed their mates on the nests. When we got within a few hundred yards the entire colony rose amid dead silence; once on the wing the cries were deafening, and many of the birds swooped angrily at us as we walked among the nests. We saw a great many fish lying about both in and round the nests, many of them headless.

We saw hundreds of nests, most of them containing three eggs, but some only two. The birds generally begin to lay here about the beginning of the last week in April, and fresh eggs are not easily obtained after the first week in May. Most of the nests were in very swampy places, on little tufts of heather or grass, among pools of water full of rank moss growing up to the surface; such nests were usually flat flimsy structures of reeds and grass. Those which were built on dry places among the long heather were much more carefully built; they were always on the top of the heather, never on the ground among it, and were, as a rule, rather bulky structures of heather and rank grass, lined with fine grass.

I photographed one of the most typical nests I could select, and the annexed Plate is taken from it. It contained one of the curiously shaded eggs with a thin shell, and two others quite unlike it. While we were at the nests the whole colony flew above us at a good height in the air; the chorus of cries was kept up all the time, each bird calling incessantly '*Kĭk-kĭk-kĭk-krrr-krrrk*,' the owners of the nests we were investigating often swooping down on us with cries of rage, in which case the cry was a long-drawn '*Krrrrrr*' uttered as they rose again.



BLACK-HEADED GULL. *Larus ridibundus.*

1/4 NATURAL SIZE.

LITTLE GREBE

Podicipes fluviatilis

THE Little Grebe is by far the most widely distributed of its genus throughout the British Islands, including the Orkneys and the Outer Hebrides, and breeds in most districts which are suitable to its habits.

Like its congeners, it is essentially a bird of the water, preferring small ponds full of reeds and covered with water plants, or still pools among the more sluggish streams. It is a most beautiful diver, and obtains most of its food below the surface; this consists mainly of water insects, tiny fish, and tadpoles, sometimes even the buds and tender shoots of the water plants. During the winter it frequents the larger waters, and may often be seen on the coast in some quiet estuary with low-lying grassy shores. The Little Grebe is a very shy bird, and dives immediately on being alarmed, hiding itself among the reeds or water plants with only its bill above the surface, or skulking among the holes under the banks.

The Little Grebe usually commences nesting operations about the middle of April, sometimes a little later; and is known to rear two broods in the year, the young of the first brood assisting in the management of the second. The nest is usually a floating mass of water-plants and reeds anchored to some semi-submerged branch, or tied to and among growing reeds. As a rule it is a low wet-looking mass of decaying weeds—not at all like a nest,—as the eggs are invariably covered by the bird with pieces of wet weed taken from the sides of the nest, before she will leave them.

A very good instance of the extreme care that these birds take to conceal their eggs was a nest I came across in the reedy backwater of a stream, not twenty feet from a well to which the villagers came many times in the day to draw water. By carefully concealing myself within sight of the nest, which was fairly in the open, I found that the bird covered her eggs carefully and left the nest every time that any one came to the well. That she did this

during the entire period of incubation I am perfectly convinced, as on the three different occasions on which I watched her for several hours, she never once departed from this course of action.

There used to be a very well known Little Grebe in the 'narrows' at Loch Ard, in Perthshire, which violated all the customs of its predecessors. Its nest was a lofty pile of black-looking and very rotten weeds, founded on the submerged branch of a small alder-bush growing out of the bank, without the faintest vestige of cover anywhere near, and very conspicuous—in fact, almost a landmark. On the top of this imposing structure the little bird sat in state upon its eggs, and allowed passing boats to come quite close to it without paying the slightest attention; if driven off the nest she quickly dived into the water without attempting to cover her eggs, and reappeared a few feet from the nest, close to the bank, where she hung about till the boat moved on. In the beginning of May 1894 some ruthless person took away her whole nestful of eggs at one fell swoop, but I observed her in the beginning of July sitting upon three eggs in the same nest.

This is rather a curious fact, as the Little Grebe is always most particular about covering her eggs before leaving the nest, and generally dives quietly away from it, hardly leaving a tell-tale ripple, hiding herself in the nearest cover till danger is past.

The number of eggs laid varies from three to six, but five is by far the most common clutch. They are pale cream colour—almost white—when first laid, but they very soon become a dirty rust colour with the constant wet of the decaying reeds and the birds' feet. They vary from 1·5 to 1·2 inch in length, and from 1·1 to 1·9 inch in breadth, and are always much smaller than the eggs of any other British-breeding Grebe. They are rather a curious shape, and have a distinct point at both ends of the egg. Incubation lasts from eighteen to twenty days, the birds frequently leaving the nest during the hottest part of the day, when no doubt the heat of the sun and the fermentation of the decaying reeds are quite sufficient to keep the eggs warm; in this case the eggs are not covered.

Young in down are almost black on the upper parts, including the head and neck upwards from the breast, striped longways with rich chestnut, and have a white V on the throat, and white under-parts. As soon as the young are hatched they can swim quite well, and can thoroughly take care of themselves at the end of a week, when they can dive quite a long distance. The old bird is very attentive to them, and if danger threatens them she will dive away with them, raising her wings and allowing them to creep under.

PLATE I

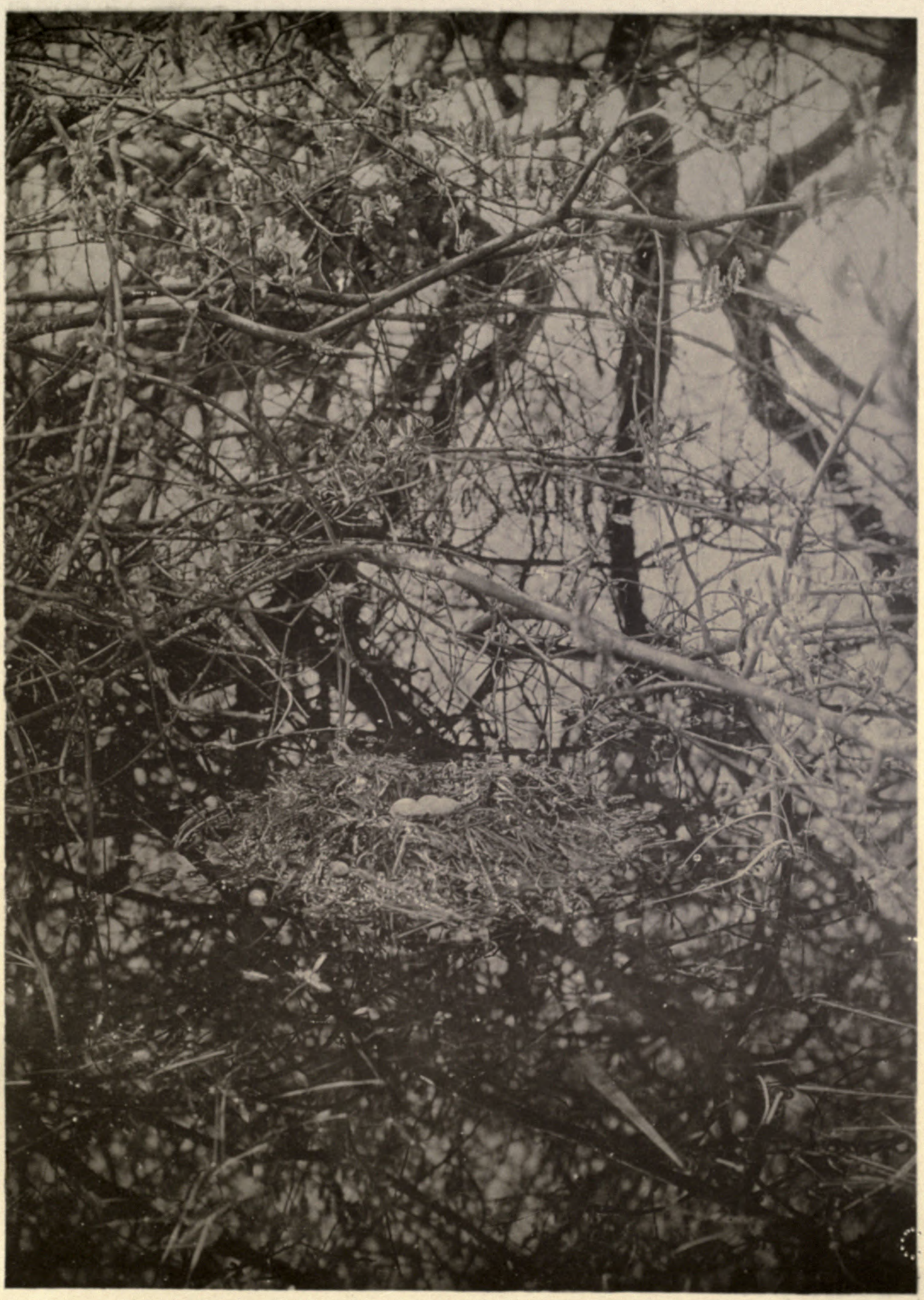
LITTLE GREBE. *Podicipes fluviatilis*

May 29th, 1895.—This Plate is from a photograph of a nest on a small loch near Doune, Perthshire. It was built in a shallow bay on the submerged branches of a willow growing in the shallow water, and contained four fresh eggs. The bird was on it when I first saw it, but she hastily covered her eggs with some of the fresh green weeds lying on the nest, and dived quietly away, and though I stood within a few yards of the nest, I couldn't make out where she came up.

I lay down among the long grass about twenty yards off and watched for her return; she did not keep me long waiting, for she was back again in about three minutes; she had evidently dived some way off, as she rose almost beside the nest. For a second or two she sat motionless on the water, and then got into the nest, removing the weeds from the eggs, which she carefully turned one at a time before settling herself on the nest again. In about a quarter of an hour her mate arrived with some food for her, which, however, she refused, so he ate it himself and then proceeded to dive for small pieces of green weed, which he tore to pieces on the surface, giving each little piece a good shake before leaving it.

Presently the female got off the nest, leaving her eggs uncovered, and swam away among the reeds with her mate. I gave them two or three minutes to get away a bit, and then waded in and got a photograph of the nest. I had just got finished, and was putting away my camera on the shore, when I saw the Little Grebe coming back full speed; she dived some little distance from the nest, and, coming up beside it, hastily covered up the eggs, and left the nest, and I did not see either of the birds again, though I hung about for half an hour.

I came back next morning and found the eggs were uncovered, but the Little Grebe quickly appeared at the nest and pulled some weed over them, though I was standing in the open within ten yards of the nest, which looks as if the Little Grebe only covers her eggs as a means of concealment, and not really for the sake of keeping them warm.



LITTLE GREBE. *Podicipes fluviatilis.* *Plate I.*

1/3 NATURAL SIZE.

UNIV. OF CALIFORNIA

UNIVERSITY OF MARYLAND

PLATE II

LITTLE GREBE. *Podicipes fluviatilis*

May 29th, 1895.—This nest was built in the outskirts of a huge bed of reeds on the north shore of the Lake of Monteith. The bird was not on the nest when I first discovered it, and there were only two eggs, which were not covered. On my return from taking some photographs at the other side of the lake, however, she was on the nest, and allowed me to come within about twenty yards before she hastily covered her eggs and dived away from the nest.

I secured a photograph of the nest, covered up as she had left it, and planted my camera in the water beside some thick reeds about twelve feet from the nest, set it, and retired some distance off, with a thread to the shutter, to try and get a photograph of the bird on the nest. I sat there about a quarter of an hour before I saw her; she dived some way from the nest and appeared between it and the camera, but, catching sight of this strange object, she dived at once, and reappeared about ten yards away on the farther side of the nest. I waited a long time to see if she would go to the nest, but nothing would induce her to get on to it, though she dived about all round it, and I had to give it up at last.

I visited this nest again some time later, and found one young one and two eggs in the nest. The old birds were very anxious when I came close, and kept diving about round the nest, and uttering a plaintive '*weet-weet*.' When I took the little bird in my hand one of the old ones came quite near, and splashed along the top of the water, just as an old Mallard does when she is disturbed with her young. When I left the nest the old birds immediately covered the two eggs, and one of them held up its wings and took the young bird under them, diving away with it to some safer place. The Little Grebe is a wonderful diver, and seems to swim as much under water as above it. I never saw either of the birds approach the nest on the surface; they always dived some way off and appeared just beside it.

There was splendid feeding for the Grebes in this rush-bed, and I found two other pairs with nests not fifty yards distant.



LITTLE GREBE. *Podicipes fluviatilis.* *Plate II.*

2/3 NATURAL SIZE.

GOLDEN PLOVER

Charadrius pluvialis

FROM the English grouse-moors in Yorkshire and Derbyshire to the extreme north of Scotland, including the Orkneys, Shetlands, and Hebrides, as also suitable localities in Ireland, the Golden Plover is a fairly common species during the breeding season, and frequents all our coasts in winter, remaining inland in a few favoured districts.

The Golden Plover loves the bare moors and open tracts of waste country, and is found in all such localities, from the benty heath-covered wastes on some of our northern shores to the desolate bogs and mountain tops of the Grampians or Cairngorms. When an intruder appears near its haunts it instantly utters its alarm-note, a plaintive, long-drawn whistle, often flying towards him and alighting quite close. Though a very shy and wary bird during the winter, it forgets much of its usual timidity during the breeding season, and may often be observed within a short distance running along among the heather or grass, or standing motionless on some tussock watching.

During the early spring Golden Plovers may be often seen in large flocks feeding in the green fields or on the edge of the moors. If disturbed they rise in a body, and after wheeling in the air once or twice, fly off to some fresh feeding-grounds, generally in the form of a V, after the manner of Wild Geese.

The food of the Golden Plover consists chiefly of worms, grubs, and small insects. During winter, when they principally frequent the coasts, they live chiefly on marine animals, and in very hard weather they will eat small seeds and morsels of various plants. During the winter large flocks of Golden Plovers may often be observed feeding on the open sands, some probing in the mud, others running swiftly to and fro, or standing motionless with head erect, while some wade about in the little shallow pools. On the slightest alarm the whole flock rises in the air, and, after performing various

graceful wheelings and turnings, often at a great height, they fly off to some distant part of the shore.

The call-note of the Golden Plover is a clear whistle, rather plaintive in tone, and often excessively difficult to locate, and may be represented by the syllables '*kl-ēē klēē.*' It is often repeated so rapidly during the pairing season that it resembles a trill, '*Kl-ēē-ā, kl-ēē-ā, klēē-ā.*' The alarm-note is a shrill clear whistle, generally on the same note, neither rising nor falling in tone, and may be heard at a great distance.

The Golden Plover seldom commences nesting operations before the end of April, and eggs are laid about the end of the first week in May, incubation lasting about eighteen days. The bird is fairly sociable, and several pairs usually frequent the same tract of moor. The nest is extremely difficult to find, as the bird leaves it long before the intruder approaches, and runs silently away from it, very often towards him, uttering her plaintive note and striving to lead him away from her treasure. Their colouring harmonises so well with the surroundings that Golden Plovers are quite invisible at even a comparatively short distance when standing on some tussock perfectly still, watching the intruder.

The nest is usually a depression in the ground on the top of a mossy tuft, and is lined with bits of dry grass, scraps of lichens and moss, and is, as a rule, rather larger and deeper than that of the Lapwing. Four eggs are laid, points inwards, as is usual with the Waders. They are very handsome, and vary in ground colour from cream to rich buff, or pale, yellowish green, approaching olive; they are blotched and spotted with red brown, rich purple brown, or dark brown, sometimes with black and a few grey under-markings. Some specimens have the surface-markings varying from the size of a small pea downwards, and fairly evenly distributed over the whole surface; others have large irregular blotches on the large end of the egg, many of which cover a considerable portion of the shell. In many clutches one egg may be found which is much rounder and shorter than the others, probably the last laid. They are usually very pyriform in shape, and are, as a rule, larger and more brightly coloured than those of the Lapwing, and vary in length from 2·2 to 2·1 inches, and in breadth from 1·5 to 1·3 inch.

Young in down are yellowish on the upper parts, blotched and spotted with black markings, and have almost white under-markings. They leave the nest as soon as they are hatched. They are beautiful little creatures, and are almost indistinguishable from the ground when crouching beside some lump of moss or tuft of grass.

PLATE I

GOLDEN PLOVER. *Charadrius pluvialis*

June 3rd, 1893.—We walked right up to this nest as we came over a ridge of sandhills on Tents Muir, Fifeshire. The bird was sitting, and rose almost at our feet, uttering her plaintive whistle as she flew away. The nest was a mere depression in the ground on the sunny side of a sloping sandy knoll, and was very scantily lined with a few bits of bent, moss, and grass. The eggs were very handsome and beautifully marked; the ground colour was a pale, yellowish green, and the markings were rich purple black and red brown, and grey under-markings. One of the eggs was much shorter and rounder than the others.

As it was about lunch-time we halted here, and I took two photographs of the nest and its surroundings, and packed the eggs in my camera case. The old bird soon returned, and we saw her running round and round at a respectful distance, taking a short flight every now and then, and continually uttering her alarm-note. Her mate did not put in an appearance.

The Golden Plover is a very tiresome bird to watch to its nest; its plumage is so like the colour of the surroundings that it is a great strain on the eyes to follow its movements, and if lost to sight for a few minutes it is almost impossible to pick it up again. It will run a short distance in a stooping position, and stand, with head erect, on the top of some little tussock for five minutes, then run a little farther, or perhaps retrace its last steps, stand again, and so on. At last it settles, as you think, slightly raising its wings; you give it a few minutes' grace, and just as you are about to walk forward to the place it moves off again, and it may be fully half an hour before it finally settles on its nest.



GOLDEN PLOVER. *Charadrius pluvialis.*

3/4 NATURAL SIZE.

UNIV. OF CALIFORNIA

LAPWING

Vanellus vulgaris

THE Lapwing, or Peewit, as it is often called, is by far the commonest and most generally distributed of the Plover family throughout the British Islands. It breeds in every county throughout Great Britain, and on most of the outlying islands round our coasts.

The Lapwing may be found in a variety of places during the breeding season. It frequents the ploughed fields, large grass pastures, meadows, commons, and the edges of the moors where the ground is broken up by little pools, clumps of rushes, and small mounds, and is covered with various weeds. The male is a very graceful bird as he wheels and tumbles in the air. The Lapwing is rather a wary bird, and does not suffer itself to be approached very closely, except when anxious for the safety of its young; then it will tumble along the ground as if its wing was broken, and fly round and round the intruder's head, uttering its wailing cry, '*Pēē-sweet*, *Pēē-sweet*,' sometimes swooping down just above his head, making a buzzing noise with its wings, in its attempts to drive him from the young ones.

When their haunts are invaded, the birds rise in the air and fly rapidly about, tumbling and wheeling in the most grotesque manner, uttering their peculiar notes; sometimes flying round and round, flapping their broad wings, and making quite a humming sound with each rapid stroke, or tumbling heels over head in the air, which performance is always accompanied by a curious lengthening of the last syllable of their note, and might be represented thus: '*Pēē-sweet*, *Pēe-sweet-swēēt-swēēt-swēēt-swēē-ou-wēēt*.' It is a gregarious bird, and in some parts of the country great numbers of these birds breed in close proximity, though hardly in what might be called a colony.

The food of the Lapwing consists of grubs, worms, insects, and small slugs, but in winter when the ground is frozen and food is scarce, they retire to the coast to feed, and may be seen flying in huge irregular flocks along the

shore. These flocks are very hard to approach, as a number of birds usually act as sentinels, and invariably warn the flock of the approach of danger. The Lapwing is a great enemy to the egg-poacher, as many a keeper has been warned by the clamour of these birds that some intruder has appeared on the scene.

About the beginning of April the birds select a nesting site, and eggs may be found from the first week of that month till the beginning of June. In a mild early spring eggs may be taken during the last week in March. I have a full clutch taken in Tweedsmuir on the 24th March 1894, and in 1887 I took three nests near the Lake of Monteith on the 23rd of March.

The nest is a slight depression in the ground, very sparingly lined with a few bits of grass, bent, dead rushes, or bits of dry moss. It is usually in the open, often on the bare turf, sometimes on the top of a molehill or tuft of peaty soil, sometimes on the dry sods beside a sheep-drain, or on the top of a ridge in a ploughed field, but very seldom concealed by any weed or tuft of grass, the bird no doubt trusting to the protective colouring of the eggs, which harmonises so exactly with the surroundings.

The eggs are usually four in number, though five are found on rare occasions. They are subject to much variation both in colouring and shape, some specimens being long and thin, and others almost round. The ground colour varies from pale buff to buffish brown or olive brown, sometimes pale green or olive green, thickly blotched and spotted with very dark brown, and with a few purple-grey under-markings. On some eggs the markings are small and distributed evenly over the whole surface, while on others they are large blotches running into each other, and forming irregular patches of colour; and this type of egg has all the markings in a ring round the large end of the egg. Occasionally a pale bluish-green egg is found, with only a few faint blue-black spots on it—in fact, only half-coloured. I have taken two or three of these specimens from clutches of full-coloured eggs. This type is sometimes found, dropped by accident, nowhere near a nest. They vary in length from 2·0 to 1·6 inches, and in breadth from 1·5 to 1·3 inch. Incubation lasts from eighteen to twenty days, and the downy chicks leave the nest as soon as they are hatched.

Young in down are pale brown on the upper parts, thickly blotched and spotted with black; they have white under-parts, with a blackish band across the breast. They are extremely hard to find, as they exactly resemble a clod of earth when they are crouching motionless on the ground. If picked up and set down again they will not crouch, as a rule, but will run away as fast as their legs can carry them, tumbling over every obstacle in their eagerness to escape.

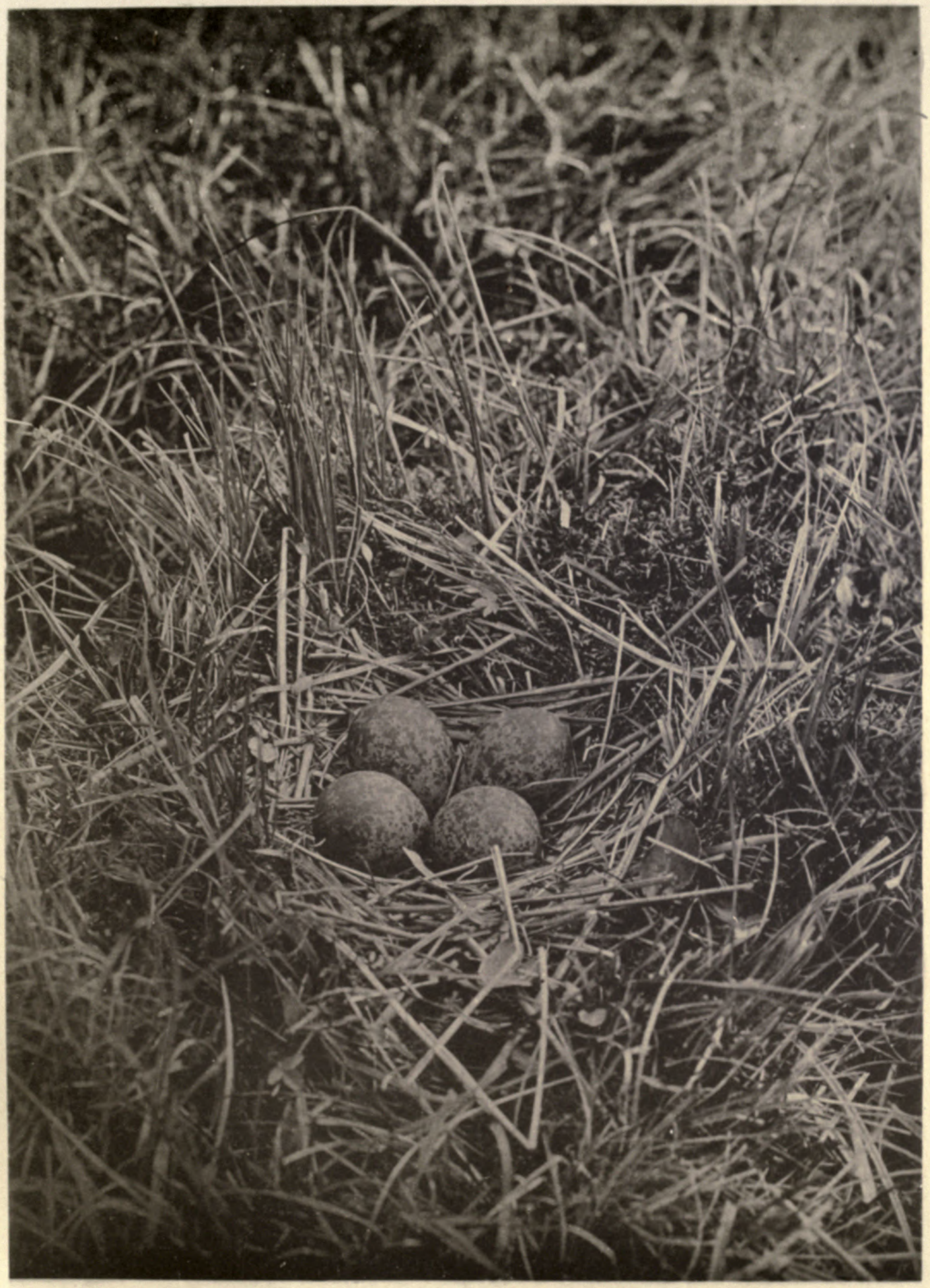
PLATE I

LAPWING. *Vanellus vulgaris*

April 26th, 1893.—This nest was chosen from about twenty which I looked at in a damp grassy meadow near the Lake of Monteith. The birds were simply swarming there, and there were also many pairs of Redshanks.

Most of the nests were rather neatly built of rushes and grass, but very flat, slight structures. The eggs were all very highly incubated, and I saw a great many young birds crouching among the grass trying to hide themselves. I came across one nest of four eggs, all chipped, from which quite a chorus of cheeping could be heard distinctly several feet from the nest. When I passed the nest about half an hour later there was only one egg left in the nest, the others having hatched out, and the nestlings were hidden in the grass not far away.

It is very wonderful how soon the young birds know that danger is at hand by the cry of their parents, and instantly try to hide themselves by crouching motionless among the grass whenever they hear the alarm-notes. They do this by instinct, though only just hatched.



LAPWING. *Vanellus vulgaris.*

Plate I.

1/3 NATURAL SIZE.

UNIV. CALIFORN

PLATE II

LAPWING. *Vanellus vulgaris*

May 1st, 1895.—The nest from which this Plate is taken is a very typical specimen of the Lapwing's nest in a ploughed field. The bird seems to be very partial to this situation, though the nest is not nearly so well concealed in this case as it is when it is placed among grass or heather. The top of the ridge is always chosen, and a slight hollow is made and lined carelessly with a few straws or bits of grass root picked up close by. A sloping field with a southern exposure is much preferred, and under such favourable conditions many nests may be found in close proximity.

After the eggs have been laid some time they become caked with mud from the birds' feet, and when this is dry they look very like little balls of mud, though the symmetry of their arrangement scarcely leaves room for doubt as to their identity. The nests in this particular field had all been emptied of their contents two or three times before, hence the lateness of the date, but in spite of this all the nests we found with eggs had their full complement.

I counted sixty or seventy nests, but only eleven contained eggs or young birds, many of the others being hatched out and the nestlings gone, and the nests had been already robbed of their contents. The old birds left the field entirely after flying about above our heads for a short time, and scolding us, and retired to the neighbouring fields, from which they watched our movements, flying over singly every now and then to see if we had taken away their eggs or young.



LAPWING. *Vanellus vulgaris.*

Plate II.

1/3 NATURAL SIZE.

HERRING GULL

Larus argentatus

THE Herring Gull is a common resident round the British coasts, and may be seen on most of our shores during winter; in summer, however, it is mostly confined to the localities which are suitable for breeding purposes. It breeds on the cliffs on the south and west coasts of England, as also in Wales, and has many colonies round the Scotch coasts and islands, including the Orkneys and Shetlands, the Hebrides and St. Kilda. In Ireland it also breeds in many suitable localities.

The Herring Gull is rather a shy bird, and will not allow itself to be approached very closely, the adult being exceptionally wary. In winter it frequents the harbours for the offal and refuse which is found floating there, and is a very close attendant on the fishing-boats, pouncing down upon every small fish or scrap of refuse thrown overboard. The large flocks of Herring Gulls usually found on our low-lying coasts, and on the mud flats at the mouths of our larger rivers during late autumn and winter, are principally composed of young birds; they are generally of a more wandering disposition than the adults. A flock of these birds may often be seen at a great height in the air, soaring round and round like vultures, in an ever-ascending spiral, till they look like tiny black specks.

The Herring Gull is almost omnivorous; its food is chiefly composed of small fish, molluscs, crabs, and all sorts of marine animals, but it will greedily devour carrion and garbage of all sorts, and is a determined robber of eggs. It is a very quarrelsome bird when feeding, and often robs its smaller relations of some choice morsel. I have frequently seen a Herring Gull attack some unfortunate Black-headed or Common Gull, swooping down on it like a Skua, and depriving it of some small fish which it had just

captured. Their call-note, which is indistinguishable from that of the Lesser Black-headed Gull, may be represented by the syllables '*Hăn-hăn-hăn*,' uttered rather rapidly. The alarm-note is a guttural, '*Kēr-yŏk*,' often repeated and increasing in rapidity till it sounds like '*Eyŏk-eyŏk-eyŏk*.' Like most of the gulls, this bird will hurriedly eject the food from its stomach if fired at or wounded, no doubt endeavouring to make itself as light as possible in its efforts to escape.

About the end of April the Herring Gulls return to their accustomed breeding haunts and begin at once to prepare their nests; these are often large bulky structures of seaweed and tufts of grass, pulled up by the roots, and are lined with pieces of sea-campion, fine grass, and a few straws and large feathers. Sometimes very little nest is made, the eggs being laid in a slight depression in the ground, lined only with a few bits of dry grass. The Herring Gull is very fond of building its nest on the grassy ledges of some cliff, but also frequents low grassy islands, or those where rocks and grass alternate; among rocks the nest is placed in any convenient crannie, and is usually a bulky structure. A pair or two of these birds nearly always nest in most of the colonies of Lesser Black-backed Gulls; I found them nesting among the benty sandhills on the Culbins on the summits of the knolls, in company with several pairs of these birds.

Eggs are laid early in May, and are usually three in number, but sometimes only two. They are, as a rule, quite indistinguishable from those of the Lesser Black-backed Gull, but have a few varieties which do not occur among the eggs of that species. The eggs vary much in size, shape, and colour; the ground colour may be any shade from pale bluish green to almost white, and from dark buffish brown to greyish buff. The surface-markings are usually a rich dark brown, sometimes nearly black, and there are generally a few brownish grey under-marks. Some specimens have only a few small brownish specks on them, while others are covered closely all over with spots, some of which are as large as a sixpence. I am not aware that the rare and beautiful red variety, which occurs among the eggs of the Lesser Black-backed Gull, has ever been met with among the eggs of the Herring Gull in this country. The eggs of the Herring Gull are rather larger than those of the Lesser Black-backed Gull, and vary in size from 3·1 to 2·8 inches in length and from 2·1 to 1·8 inches in breadth.

When a colony is approached the Herring Gulls leave their nests long before the intruder has approached, and circle above him with angry cries, sometimes swooping down within a few inches of his head. When the young

are able to fly, the Herring Gulls desert their breeding-places and disperse round the coasts for the season, the young birds usually keeping in a flock by themselves. The Herring Gull carries its mottled, immature plumage a moult longer than the Lesser Black-backed Gull, and in all stages of its plumage the colours are somewhat paler.

Young in down are quite indistinguishable from those of the Lesser Black-backed Gull. They are greyish-buff on the upper parts, spotted conspicuously with black on the head and throat, and mottled with dark brown on the rest of the upper parts, and are white on the belly. The legs and feet are flesh-coloured.



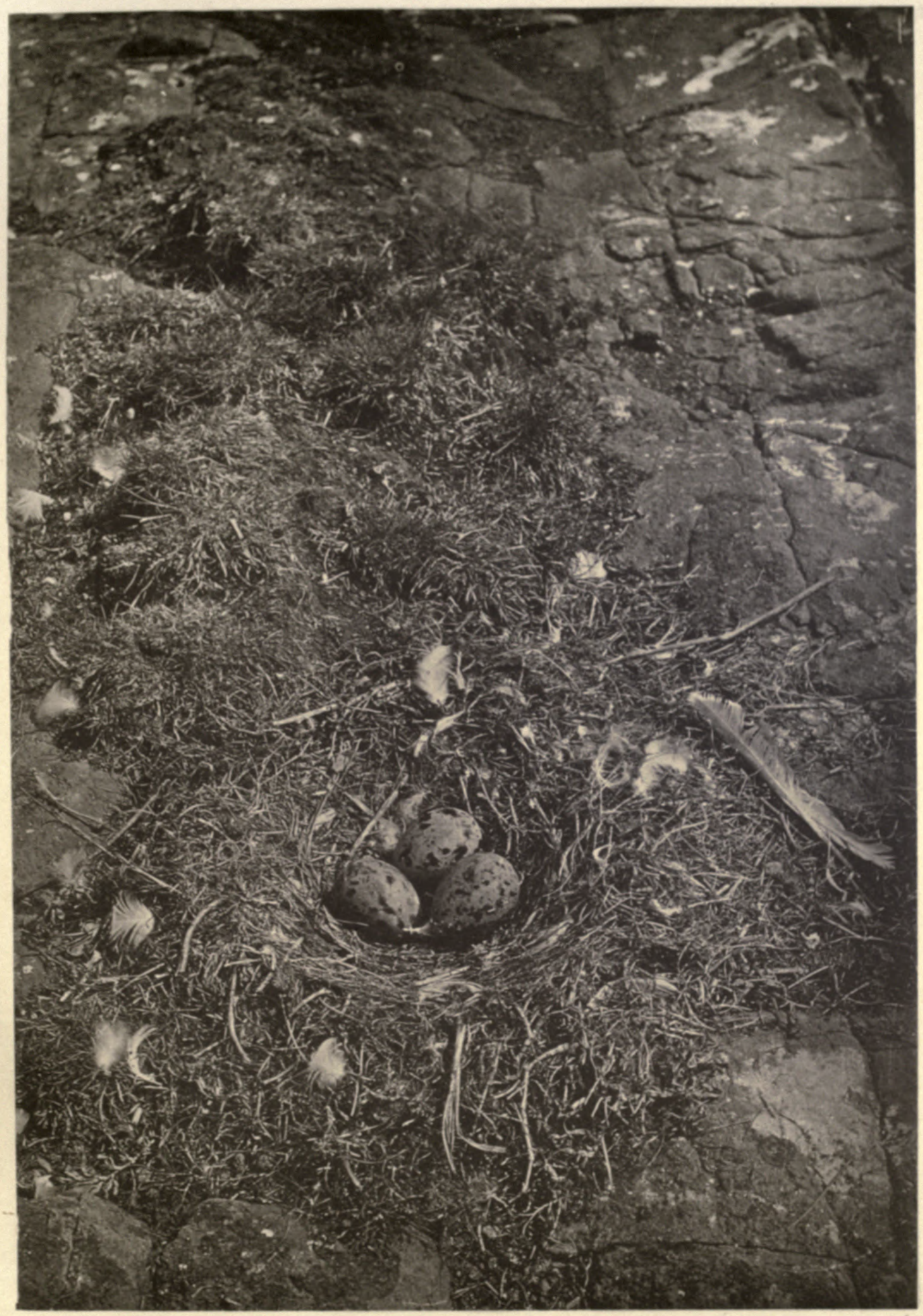
PLATE I

HERRING GULL. *Larus argentatus*

June 10th, 1893.—This photograph was taken from a nest on Staple Island at the Farnes. We saw five or six pairs of Herring Gulls on a rocky part of the island, a little apart from the general colony of Lesser Black-backed Gulls, and had no difficulty in identifying their nests. The birds were very tame, and did not seem to mind our presence in the least, flying about quite close and screaming at us. They were quite as determined robbers as the Lesser Black-backed Gulls, and we saw one sitting on a rock and tearing a young tern to pieces, much after the manner of an eagle, standing on its prey with its feet and tearing pieces off it.

The nests of the Herring Gulls were large flat structures of seaweed, grass, sea-pink, bits of turf and sea-campion, lined with fine grass and bits of sea-campion; they were absolutely indistinguishable from the nests of the Lesser Black-backed Gulls, as also were the eggs, and it was only by watching the birds go on to the nests with my glasses that I was able to tell which nest belonged to the former species and which to the latter. Although the date is rather a late one for fresh eggs of the Herring Gull, we succeeded in getting two full clutches quite fresh; we also saw two or three newly hatched nests of young birds, the old birds feeding them with half-digested food, which the young bird was allowed to pick from its parent's bill.

The Herring Gull seems to be a much stronger bird than the Lesser Black-backed Gull, as we repeatedly saw them rob the Black-backs of choice morsels of fish, and we saw a Herring Gull deliberately carry off an egg from a Black-back's nest, in spite of the protestations of the owners.



HERRING GULL. *Larus argentatus.*

2/7 NATURAL SIZE.

UNIV.
CALIFOR

GREENSHANK

Totanus canescens

THE Greenshank is a regular summer visitor to the British Islands, remaining to breed in some of the northern counties of Scotland, including the Hebrides. Though it is well known both in England and Ireland, and frequents the sea-coasts during spring and autumn, we have no authentic record of its breeding in either of these countries.

The Greenshank usually arrives in Great Britain about the end of April or the beginning of May, on its way from the Mediterranean to its breeding-grounds in the north, leaving our shores again on the southward journey in September and the beginning of October. On its first arrival in this country the Greenshank frequents the low-lying, muddy parts of the coast, and is a very noticeable bird with its rapid, erratic flight and its loud alarm-note, a double '*teü-teü*.' It is very shy and wary, and generally gets up about half a mile from the intruder, making a tremendous fuss, and putting all the other birds on the alert. It is sometimes seen in small flocks, but more commonly in solitary pairs, feeding among the little pools and creeks left bare by the tide at low water.

The food of the Greenshank consists chiefly of insects and their larvæ, worms, etc., for which it searches in the muddy pools, among the rank grass, or even among the droppings of animals. It is also very partial to tadpoles and frog-spawn; I used to see a pair come to feed every evening at a small horse-pond in Strathspey, which was simply alive with tadpoles. The Greenshanks used to be very busy there for the best part of an hour every night, running about in the shallow water with easy grace and great swiftness of foot, picking up the tadpoles and small water-beetles.

In Scotland the breeding season of these birds commences about the middle of May, eggs being laid during the latter half of the month. The nest is most difficult to find, as the birds are extremely wary, and try every device to keep the intruder away from their treasure. They are not at all social birds during the breeding season, and the nests are usually long distances apart. As a rule the nest is on the top of some slight mound, on a bare dry spot, a very marked contrast to that of the Redshank, which is usually carefully concealed in the centre of some tuft of grass, and as often as not in a damp hollow.

The nest of the Greenshank is a very slight piece of work, a mere depression in the ground, lined with a few bits of dry grass or withered leaves of the cranberry, or tiny bits of dead heather being all that is required. A very favourite situation is on the top of a bare mound on which the heather has been burnt, and little patches of peat are left bare. The nest is generally placed on one of these little bare patches, under the shelter of a few twigs of burnt heather. The Greenshank is very partial to small trees about its breeding-place, and has a habit of sitting on the topmost twig, from which point of vantage it commands all approach to its nest. If the intruder conceals himself near, to ascertain the whereabouts of the nest, the bird has an aggravating habit of sitting there yelling at the pitch of its voice for hours without stopping, until the poor ornithologist's patience is quite worn out, and he leaves in disgust. I beat them fairly, however, at Loch Morlich, in Strathspey, by accidentally discovering that while one bird was shrieking itself hoarse on the tree-top, the other very quietly slipped on to the nest, keeping almost entirely out of sight by dodging round the little inequalities of the ground. It was while it was crossing a little bare place that I got a glimpse of it, and guessed what the little ruse was.

The eggs are usually four in number, though sometimes only three are laid; they have the usual characteristics of the Charadriidæ, being somewhat pyriform, and placed in the nest with the points inwards. The ground colour varies from cream colour to rich buff, sometimes with a slightly pink tinge. The surface spots are rich dark brown or reddish brown, and the underlying markings pinkish brown or violet grey. On some specimens both the surface spots and the underlying markings are rich, irregular blotches, generally on the larger end of the egg, sometimes forming a sort of zone; other specimens are covered evenly all over with small spots, none of which exceed a large pea in size, while on some eggs the markings have more the character of streaks. They vary in length from 2·0 to 1·80 inches, and in breadth from

1·42 to 1·29 inch, and cannot readily be confused with the eggs of any other British bird.

Young in down are pale grey, tinged with rich buff, and marked with black on the upper parts, and nearly white on the under parts; their legs and feet are greenish grey. Only one brood is reared in the year, but if the first clutch of eggs be taken, a fresh nest is made, though the second nest rarely contains more than three eggs.

After the young are hatched, they are led by their parents to the shores of the nearest loch or river, where they remain until able to fly. The old birds betray great anxiety if their young are threatened by danger.



PLATE I

GREENSHANK. *Totanus canescens*

May 26th, 1896.—This Plate is taken from a nest near Loch Morlich, Strathspey. I was on my way to photograph a Goosander's nest at Loch Morlich, and was crossing a bare piece of ground, where the forest had evidently been burnt at some time, as the whitened stumps and charred trunks of trees lay about in all directions, and the ground was covered with the whitened stalks of heather; in this desolate spot there were still a few scattered trees, small and stunted, growing on the little knolls in groups of three and four, or scattered about singly on the flat ground. Suddenly a long way ahead up got a pair of Greenshanks and flew straight towards me, making a dreadful noise. I marked my spot and walked for it. On the top of a little knoll were four small trees, making quite a good shelter, and just about the spot where the birds got up; under these I lay down to watch.

For some time both the birds flew about screaming, but after about a quarter of an hour they both perched on the tops of trees some distance off, and sat there for half an hour calling incessantly. On looking at them through the glasses, at the end of that time I suddenly noticed that one had disappeared; the other still sat there yelling at the top of its voice. I was looking at a small bare place about three hundred yards away, when I thought I saw something move. I put the glasses on to it, and sure enough it was the other bird. It was most wonderfully cautious, and sneaked along, hiding behind every little inequality in the ground, disappearing at last behind a knoll. The other bird still kept shrieking on the tree-top. I gave them five minutes' grace, and then ran straight to the top of the knoll, behind which the female had disappeared. She got up fifty yards out, and I walked to the spot and dropped my handkerchief. The nest was about eight yards off, and contained two young birds in down, one of them just struggling out of the egg. I

could not find the other two young ones then, but after I had photographed the nest I saw one of them move some yards off, and I found them both.

The nest was on the side of a small knoll near the top, among the dead heather, sticks, and pieces of charred tree-stumps; it was merely a depression in the ground, and was lined with rotten wood.

The old birds were very anxious, and flew wildly about all round me, but never came within gunshot. I took a pair of the young with me and left two in the nest.





GREENSHANK. *Totanus canescens.*

1/3 NATURAL SIZE.

UNIV.
CALIFOR

ORIGINAL
BOTHELL

AMONG BRITISH BIRDS IN THEIR NESTING HAUNTS

ILLUSTRATED BY THE CAMERA

BY

OSWIN A. J. LEE

PART IV.

WOODCOCK	1 PLATE
OYSTERCATCHER	2 "
TREE PIPIT	1 "
REED BUNTING	1 "
RINGED PLOVER	2 "
LITTLE TERN	2 "
JACKDAW	1 "

EDINBURGH. DAVID DOUGLAS.

WOODCOCK

Scolopax rusticula

THE Woodcock is not a common bird during the breeding season, and is very locally distributed throughout the British Islands, but large numbers of these birds visit us during the spring and autumn migrations.

The Woodcock is almost entirely a night-bird, and only leaves the woods, where it skulks during the day among the brushwood and dead bracken, when the twilight descends. Then it seeks its food among the marshes, preferring those where there is running water and plenty of rank vegetation. Its food consists almost entirely of small earthworms, but it will eat the larvæ of some insects, and on rare occasions it has been known to eat vegetable food. The Woodcock has regular paths to and from its feeding-grounds, and numbers of them used to be caught in specially adapted snares, consisting of a stick with a noose spread on it, set in the path, and fastened to a springy sapling bent over. When the stick was displaced by the bird stepping on it, the sapling sprang up and hitched the noose round the unfortunate bird's legs, suspending it in the air.

During the breeding season the male may often be seen in the twilight or early morning flying backwards and forwards above the wood where his mate is sitting, uttering his peculiar cry, which consists of two or three notes, the first a curious, long-drawn, hollow sound, followed by two quick high whistles uttered at intervals. During this performance, which often lasts twenty minutes, the plumage is puffed out, and the flight is slow and steady, giving the bird rather the appearance of an owl.

The Woodcock is a very early breeder, and full clutches of its eggs may be taken during the first week in April. I have seen a nest with its full complement of eggs as early as the 18th of March in the valley of the Forth

in a mild early spring. The nest is always on the ground, generally under an oak or birch tree in some wood, and is often partially covered by the dead stems of last year's nettles or brackens. It is merely a slight depression in the ground, lined with dry grass and dead leaves. I once saw four nests under one large oak-tree in a small plantation in Perthshire. They were all hidden by little clumps of dead bracken, and were mere hollows among the dead oak leaves; the birds themselves were very nearly invisible, so closely did the colour of their plumage resemble the dead oak leaves. The birds sit very closely, and will almost suffer themselves to be stepped upon before quitting their eggs.

The Woodcock lays four eggs, which are generally rather rounder and less pyriform than is usual with the Waders. They vary in ground colour from a dirty white to pale brown, and are spotted or blotched with irregular reddish-brown markings, varying in size from a pea downwards. The underlying markings are greyish brown, and are about the same size. They vary from 1·7 to 1·6 inch in length, and from 1·4 to 1·3 inch in breadth, and are not easily confused with the eggs of any other of our British-breeding Waders.

Young in down are rich chestnut on the upper parts, finely spotted with white, and blotched with black markings, and have buff under-parts, the colour being richest on the breast. The Woodcock has often been seen to carry her young from one place to another. I once witnessed the removal of two young birds from a small clump of ornamental trees, surrounded by wire-netting, but as it was rather late in the evening I could not see as clearly as I should have liked. The young one was apparently held between the legs of the parent, and pressed upward by them against its breast; the bill was not used. I did not see the old bird return, but shortly afterwards the second young one was carried past me in precisely the same manner. In both cases the flight was heavy and laboured.



PLATE I

WOODCOCK. *Scolopax rusticula*

May 6th, 1895.—This nest was shown to me by a keeper, who said it was the latest that had ever come under his notice. It was in a small plantation of oak-trees near the road-side, in a bare part of the wood among withered nettle-stalks and dead oak leaves. The nest was a mere hollow in the ground, and was carefully lined with oak leaves. The bird was sitting on it when I first saw it, but the eggs were not very long laid, and she left the nest while I was focussing my camera; however, I secured two very good photographs of the nest.

In this same plantation two years before I found three Woodcocks' nests near the end of the first week in April, and all of them contained their full complement of eggs, so it seems very probable that this was the second nest made by this pair, the first having very likely been destroyed by some vermin.

On this same day, not half a mile from this little plantation, I was walking home through a corner of the big wood near, and stumbled upon a Woodcock with three young ones. The old bird carried off one of them between her legs, and the other two hid themselves. I found one of them hiding under a piece of dead bracken, and it could very nearly fly. The old Woodcock seemed to have great difficulty in raising the young bird from the ground. Very possibly, being in such a hurry to get away, she had not got a good hold of it.

In the valley of the Forth, where most of my opportunities of observing the Woodcock during the breeding season have occurred, the numbers of nests varies greatly in different years. In some seasons the keepers come across a great many nests while collecting Pheasants' eggs, while in others hardly a nest is seen.



WOODCOCK. *Scolopax rusticula.*

½ NATURAL SIZE.

UNIV. OF
CALIFORNIA

OYSTER-CATCHER

Hæmatopus ostralegus

ON most of the coasts of Great Britain and Ireland the Oyster-catcher is a fairly common resident, except in much-frequented districts, where it is continually disturbed. North of Yorkshire and along the whole coast-line of Scotland it is plentiful, and breeds in great numbers in some localities. It frequents nearly all the adjacent islands, including the Orkneys and Shetlands, as well as the Outer Hebrides, and is also fairly common in Ireland.

The favourite haunts of the Oyster-catcher are to be found on a rocky coast, broken up here and there by sandy bays and stretches of gravel, or among the sandhills close to the shore, where there are large banks of gravel and sand intersected by little creeks and pools. On the shore it may be seen running nimbly about among the rocks and little pools, catching the marine creatures which are brought up by the tide, or turning over the seaweed to catch the sand-lice and tiny crabs that lurk below. As the tide comes in it runs about among the shallow water, picking up any choice morsel that may be brought up by the waves. Oyster-catchers are very sociable birds, and are usually seen feeding in small parties even during the breeding season. They are very wary, and rise in the air on the slightest alarm, flying to some quieter part of the coast, uttering their loud '*kŏ-pēēp, ko-pēēp,*' as they fly. The Oyster-catcher may occasionally be observed searching among the little rock-pools for limpets, which it twists off the rocks with its powerful bill, though the suddenness of the attack has probably more to do with its success than the strength, as limpets come off quite easily if taken quick enough. At high tide, when their feeding-grounds are covered, the Oyster-catchers may be seen dozing on the rocks with their heads drawn back on their shoulders or buried among their scapulars, but they always keep their weather-eye open, and there

is no getting near them, as they are away long before the gunner can get within shot. If one of the birds be shot out of a flock the others often return and wheel round and round their dead companion, calling loudly. When wounded, the Oyster-catcher often makes for the water, but it is no great swimmer, its feathers soon becoming waterlogged, and it is not capable of progressing at any speed.

The food of the Oyster-catcher is chiefly composed of limpets, mussels, and other molluscs, small crabs, sand-lice, small dead fish, and various kinds of marine creatures. It is also said to eat small pieces of marine plants. They are most regular in their feeding-hours, which are controlled by the rise and fall of the tide, and may be seen every day at the same state of the tide flying along with rapid beats of their wings to their accustomed feeding-grounds.

About the end of April the Oyster-catchers select a nesting site, eggs being very seldom laid before the second week in May, though in some districts they are much later. The bird is not very fond of sand unless it is well mixed with small stones or gravel; its favourite nesting-ground is on the shingly beaches or reaches of gravel and rocks along the sea-shore, or on the edges of some of our Scottish lochs. In the county of Moray great numbers of Oyster-catchers breed on the gravelly reaches of the Spey and Findhorn, where a summer spate often destroys many of their eggs. The bird sometimes selects a nesting site on rocky stacks a long way above the water, and has been often known to nest in fields; one such instance came under my notice in Morayshire in 1893, when I found an Oyster-catcher's nest containing three eggs in the middle of a rather stony grass field about three hundred yards from the river Findhorn. Only one brood is reared in the year, though if the eggs be taken, the pair will make another nest and lay a fresh clutch of eggs. The male is the watchful guardian of his mate, on whom devolves the task of incubation, and on the slightest alarm he gives warning to her, and she immediately runs swiftly away from the nest, head down, and rises some distance off to fly round and round the intruder, uttering her loud whistle, '*Kēēp-kēēp, kŏ-peēp, kŏ-pēēk, pēēp.*'

The nest, if it may be dignified with such a name, is merely a slight hollow among the stones and gravel, lined with broken shells and small pebbles pressed down smooth, and, as a general rule, many half-finished nests are found in the vicinity of the one chosen for the reception of the eggs. On the sea-shore the nest is often made among the dead seaweed and driftwood just above high-water mark.

The eggs laid vary in number from two to four, though three is the usual

clutch. The ground-colour varies from very pale buff to pale brown, blotched, spotted or streaked with curious writing-like scrawlings of dark brown, and a few grey underlying spots. Some specimens are covered with little round spots, pretty evenly distributed over the entire surface; others are covered with spots resembling small tadpoles, having each a tail, while some are covered with fantastic scrawlings. They vary from 2·4 to 2·0 inches in length, and from 1·5 to 1·4 inch in breadth; they are very hard to find, as they so exactly resemble the colour of the sand and pebbles among which they are laid.

Young in down are dark grey on the upper parts as far as the throat, marked with black on the head and back, and are white on the under parts.



PLATE I

OYSTER-CATCHER. *Hæmatopus ostralegus*

May 29th, 1896.—This nest was on a small island in the Spey just below Aviemore, Rothiemurchus. The Oyster-catcher is very abundant on all the gravel-banks on this part of the river, and numbers of its eggs are annually destroyed by the sudden rising of the water. On the small island on which the nest in the Plate was placed, I came across no less than five nests, all but one containing newly-hatched young. They are very hard to distinguish among the stones and little patches of moss, as they crouch motionless, and look just like little clods of earth or bits of driftwood.

All the time I was engaged in photographing this nest the old birds flew shrieking round me, sometimes alighting within a few yards of me, and running along with bent head and outstretched wings, endeavouring to lure me from the nest.

The nests were nearly all upon the bare stones, simply a hollow from which the larger stones had been removed, and smaller ones and bits of stick or broken shells put in their places. Some of them were close to some larger stones or tufts of earth and grass. I put up one or two birds from nests which contained nothing but one roundish stone on which the bird was sitting. The eggs are systematically taken by the boys about the place, who search the gravel banks for them in the evenings, and take them away to eat.

On my way to fish one day I saw three young Oyster-catchers swim across a broad backwater and hide themselves among the grass on the river bank. I was some distance off, and went to look at them, to see that they were really Oyster-catchers. I have only seen them do this once before, and that was under the same circumstances on the river Findhorn in 1887.



OYSTER CATCHER. *Hæmatopus ostralegus.* *Plate I.*

½ NATURAL SIZE.

UNIV. C
CALIFORN

PLATE II

OYSTER-CATCHER. *Hæmatopus ostralegus*

June 4th, 1895.—This nest was almost alongside of a colony of Sandwich Terns on the Wide-opens at the Farne Islands, and was a mere depression in the sand among the stones and driftwood a few feet above high-water mark.

I saw the old birds running about in the vicinity of the nest, and searched some time along the shore to see if I could come across it, but failed; so I retired some little distance and sat down. In about five or ten minutes all the Sandwich Terns were sitting on their nests, but the Oyster-catchers were still very uneasy, running backwards and forwards, but never going near the nest. At last one of them settled, and I gave it two or three minutes' grace and then walked up; to my utter astonishment the nest I found was empty, save for one round stone, which was quite warm! I found the nest with three eggs in it not ten yards from this false nest shortly afterwards. This sitting upon stones is a very curious habit of the Oyster-catcher, and I have noticed it on two or three occasions, and placed it quite beyond a doubt, as I took the trouble to spend half a day watching one bird on the Culbin Sands who had a nest of this kind with a round stone in it. I watched the bird go to its nest in the first case, and put a white stone near it so as to mark it, and then retired to a little distance; when the bird returned I very carefully marked it with my glasses and, after waiting about a quarter of an hour walked up; the stone was quite warm, and all the surrounding ones not in the nest, cold! I repeated the performance three times, and each time the bird flew round and round me calling anxiously as I approached the nest. I returned next day and found the bird on the same nest, and subsequently discovered, by shooting the bird, that it was a male; the female having a nest containing three eggs nearly two hundred yards distant.



OYSTER CATCHER. *Hæmatopus ostralegus.* *Plate II.*

3/5 NATURAL SIZE.

TREE PIPIT

Anthus trivialis

THE Tree Pipit is a very widely distributed summer visitor throughout the British Islands. It is common in most suitable localities in England though somewhat scarcer in Wales, but in Scotland it is not so abundant though it is to be met with in most counties as far north as the Orkneys, and is plentiful in one or two favoured localities. In Ireland the Tree Pipit is much rarer and very local in its distribution.

The Tree Pipit is a woodland bird, preferring the open parts of forests, woods and plantations or rough country studded with oaks and birches, and is very partial to grassy fields which have rows of tall trees along the hedges. In such places the male may often be seen in spring as he flies up from the topmost twig of some tree, ascending nearly in a perpendicular line like the skylark, and pouring forth his melodious little song. It is not nearly so long a performance as the song of the skylark, and after hovering in the air for a few moments he descends in a spiral with wings and tail outspread, finishing his song as he reaches his usual perch, with two or three long plaintive notes, which may be represented by the syllables '*tsēē-ăr*, *tsēē-ăr*, *tsēē-ăr*.' During the nesting season the male may often be seen flying from tree to tree, sometimes chasing an insect or dropping to the ground for food, but ever warbling his melodious song. The call-note of the Tree Pipit is a long drawn '*seease*,' reminding one rather of the note of the Greenfinch. After the middle of July, when the moulting season has begun, the song of the Tree Pipit is very seldom heard and the bird is much more shy and retiring.

The food of the Tree Pipit is chiefly composed of insects, caught among the leaves of the trees and undergrowth, it also eats small worms and caterpillars which it catches as it runs nimbly about on the grass. During autumn it feeds on the seeds of various grasses, and will even pick up the scattered grain in the cornfields.

The Tree Pipit does not stray far from its nesting haunts, the male generally choosing some perch on the top of a tall tree where he may be seen during the entire breeding season; the pair will return year after year for several successive seasons, to the same situation from which it seems probable that the bird pairs for life.

The Tree Pipit is very cautious in approaching its nest, generally dropping down on to the ground at some little distance from it and threading her way to it among the long grass. She sits very closely, and is not easily flushed when once incubation has commenced. At this time the male is rarely far from the nest and usually keeps to his favourite tree, every now and then indulging in one of his song-flights or collecting food and taking it to his sitting mate. The nest is always built upon the ground, among the grass or young corn, often on a bank in a wood among the grass, ferns, wood-sorrel and wild hyacinths, sometimes just beside a path or disused cart-road through a wood, or in a hay-field right out in the open under a tuft of grass. It is usually built in a little hollow, scraped out by the birds, and is made of dead grass, moss and grass roots, and lined with fine grass and horsehair. The nest is usually rather deep and beautifully rounded, and is generally very cunningly concealed.

From four to six eggs are laid, usually about the middle of May; they are subject to great variation in colour, though the eggs in a clutch are generally pretty nearly alike. Each bird, apparently, has its peculiarity in colouring, and the same type of eggs is generally found in the same situation year after year. There are two types, one, in which the spots are very small and finely peppered over the entire surface of the egg, often almost hiding the ground colour, the other, in which blotches or streaks take the place of the spots, and are usually principally confined to the larger end of the egg, leaving the ground colour visible at the smaller end. The ground colour may be pinkish-white or any shade of rich red-brown, and in the greenish type olive-brown or dark-brown, sometimes greenish-blue, the spots on the reddish type being dark red-brown and on the greenish variety olive-brown or very dark brown. The darker-coloured eggs are generally found in woods or under the shelter of trees or bushes, and the lighter, more richly coloured ones, in the open fields. They vary in length from ·90 to ·75 inch, and in breadth from ·65 to ·55 inch.

Two broods are occasionally reared in the year, the young being chiefly fed on small insects, caterpillars and grubs of various kinds. The Tree Pipit leaves its summer quarters on its southward migration about the end of September.

PLATE I

TREE PIPIT. *Anthus trivialis*

May 31*st*, 1893.—This nest was photographed on a bank beside a path in a strip of wood near Doune, Perthshire. It was concealed beneath a little tuft of grass among ferns, wood-sorrel, and wild hyacinths, and contained five very highly incubated eggs, which were of the very dark-red type.

As we approached the nest the bird flew out and crossed the path, tumbling along on the ground with wings and tail outspread pretending to be wounded, and we saw her running about among the grass near us all the time I was photographing the nest. The male was perched in the top of a very tall oak tree close by and took very little interest in our movements, indulging in little snatches of song, or leaving his perch to chase some insect like a fly-catcher, always returning to his favourite perch.

The nest of the Tree Pipit is very difficult to find. It is quite easy to locate the nest within twenty yards or so, by the perch of the male which is usually on the top of the nearest tree, but the female takes great care how she approaches the nest, dropping down some way from it and walking about in the grass, apparently feeding, but always drawing nearer to the nest, often quite hidden among the grass, so that the uninitiated may walk forward and put her up, when lo, there is no nest. I was very nearly beaten by one nest in the grass just in front of the house. A large oak tree grew opposite the door, and there was a dead tree-stump close to it; I saw both birds several times together, and the male always returned to his perch after feeding about for a little. The female would fly a few yards and alight on the stump, then she would hop down and begin running away through the grass till she was ten or twelve yards away from it and then disappear among the tufts of coarse grass. I put that bird up twenty or thirty times in different places before it occurred to me to look at the root of the stump, and there was the nest!



TREE PIPIT. *Anthus trivialis.*

⅔ NATURAL SIZE.

REED BUNTING

Emberiza schœniclus

THE Reed Bunting is one of the most widely distributed of its genus throughout the British Islands and breeds in most of the marshy districts in England and Ireland. In Scotland it is widely distributed and breeds also on most of the adjacent islands which are suitable to its habits, including the Orkneys and the Outer Hebrides.

The favourite haunts of the Reed Bunting during the breeding season are not far from water. It is very fond of the reed-covered banks of slow running streams or the willow clumps on the shores of lochs, the edges of the moorland among the reedy swamps or even the ditches by the roadside. It is quite as much at home among the wilds of the Highlands as it is on the low marshy broads in the South. During winter the Reed Bunting forsakes its marshy haunts for the fields and hedges near the stackyards, where it picks up the scattered grain and seeds in company with other finches. It is not, as a rule, seen in flocks, but three or four pairs are usually found associating with other species. It is a very lively bird and is generally fairly tame, and each pair has its own particular haunt during the nesting season from which they seldom stray. The flight is undulating and rather jerky like that of most of the Buntings, and it is very fond of clinging to some upright reed or twig. The cock is a very attractive bird with his chestnut back and black head, and is usually seen sitting on the top of some fence or bush not far from his mate, singing his simple and somewhat monotonous song. The alarm-note is a long-drawn '*chēēe*' or '*zēēe*.'

The food of the Reed Bunting consists chiefly of insect and larvæ, small worms, gnats, and fresh-water shells, and it may be seen chasing the bright-coloured dragon-flies which flit about the reeds and iris clumps during summer. During winter, when such food is not obtainable, they eat the seeds of various grasses, and any scattered grain that may be found about the stackyards or sheep-folds, where hay is put out for food.

The Reed Bunting begins nesting operations towards the end of April or early in May. The nest is usually built upon the ground, or almost on it, among the rank vegetation, sometimes under a tuft of grass, or among the stems of tall reeds, and it is artfully concealed by broken-down reeds or overhanging grass. I have frequently found it in the lower branches of tiny spruce firs, choked with weeds in a small plantation close to a sluggish stream in the valley of the Forth; but this is the only locality in which I have seen the nest in a tree. It is sometimes built in the heaps of cut reeds, which are collected for thatching or bedding and left against some hedge in the meadows, but it is most frequently found on some bank close to water among the stems of the rank herbage. The materials of which the nest is formed depend greatly on the situation and character of the surroundings. In the small spruce trees before mentioned, the nests were almost entirely constructed of dry grass and lined with very fine grass and horsehair, while those among the reeds and willows on the shore of the Lake of Monteith were simply built of reeds, the dry dead leaves forming the nest and the fluffy last year's flower being used as a lining. The nest is rather difficult to find as it is so well concealed, and the bird often slips quietly away through the reeds. If put up from the nest she flutters along the ground with wings and tail outspread, tumbling along as if wounded, the male often joining her in her attempts to lead off the intruder.

The eggs laid vary in number from four to six. The ground colour varies from greyish-green to pale violet-grey or pale buff, blotched, spotted, and streaked with rich purple-brown, sometimes so dark as to be almost black, and with pale purple-grey undermarkings. The surface-spots are not nearly so scrawly as those on the Yellow Hammers' eggs, and are usually rather blurred and not nearly so numerous. Some specimens are very handsomely marked with large blotches, some of them being the size of a small pea, while others are nearly white in ground colour and very sparingly marked. They vary in length from ·85 to ·65 inch, and in breadth from ·60 inch to ·55 inch.

Two broods are frequently reared in the season, the young being fed almost entirely on larvæ and small insects. In May 1893, I disturbed a Cuckoo from a nest of this species in a rush bush on the shore of the Lake of Monteith, and on examining the nest I found the Cuckoo's egg in it. It was pale buff colour, thickly spotted all over with reddish-brown spots. The two Reed Buntings mobbed the Cuckoo as she flew away from the nest and followed her till she was some distance away.

PLATE I

REED BUNTING. *Emberiza schæniclus*

May 27th, 1893.—This Plate is taken from a photograph of a very pretty nest among sedges and reeds on the shores of the Lake of Monteith. At the mouth of a small burn, running into the lake, was a small marshy meadow, dotted over with clumps of willow-bushes and patches of tall sedges and flowering reeds. This was a perfect paradise for Reed Buntings and Sedge Warblers, and one could take eight or ten nests of each species in one morning in the old days, but the meadow has been drained and otherwise reclaimed, and now not one pair remains for every ten that used to nest there. There are still, however, one or two nice clumps of willows, each of which holds a pair of Reed Buntings, and the male may generally be seen on some twig pouring forth his monotonous little song, or dodging about among the reeds and grasses catching insects.

The nests were usually among the sedges, about six or seven inches above the ground, among the stems of the weeds and grass, and were beautifully built of reed-leaves and lined with the flower of the reeds. The male has a habit of accompanying you along the bank of the stream, letting you come almost up to him and then flying on again, sitting on some twig jerking his tail and calling. When he has gone far enough away from his haunt and has, as it were, seen you off the premises, he makes a detour and, crossing the stream, flies back to his usual perch.

When the young have been hatched the old birds are very busy collecting insects to feed them with, and the male is more demonstrative than ever in showing you past his domain, flying back with an air of 'that's all right' after he has seen you safely past.



REED BUNTING. *Emberiza schæniclus.*

½ NATURAL SIZE.

RINGED PLOVER

Ægialitis hiaticula

THE Ringed Plover is a pretty generally distributed resident in all suitable localities throughout the British Islands, and is commonest on the gravelly and sandy sea-coasts, though in some inland districts it is found in considerable numbers on the gravelly shores of our lochs and larger rivers. Where the ground is suitable to its habits it is found on most of the islands off our coasts, including the Orkneys, Shetlands, and the Outer Hebrides.

The favourite haunts of the Ringed Plover are on the sandy parts of our coasts, especially at the mouths of rivers where there are large stretches of sand covered with shells or banks of shingle; they are also found on the shores of many of our inland lochs and on the gravelly reaches of many of the larger rivers. On the Culbin Sands in Morayshire they are very plentiful as well as on the gravel beds on the Spey and Findhorn, miles from the coast.

Few of our Waders are so interesting to watch in their movements as the Ringed Plover. They are very wild, wary birds during the winter, but throw off most of their timidity during the breeding-season, at which time they may be approached within a short distance. They are very difficult to see among the small stones on a gravelly beach, so closely does their plumage resemble the colour of the surrounding stones, and their whereabouts is often only discovered as the bird rises almost at the intruder's feet. When feeding on the shore they run with great swiftness of foot, darting after some insect or sandhopper, stopping for a moment to pick up something, and running on again for a few feet, sometimes hurrying along the edge of the water and picking up the tiny marine creatures left by the tide, running in-shore as the waves sweep up the sand, and every now and then taking to their wings as the water rushes round them.

The call-note of the Ringed Plover is a short '*trrr*' somewhat harsh in tone, which, in the pairing season, is repeated so rapidly that it forms a sort of soft trill. The alarm-note is a plaintive '*kōō-ĭt*' which, though not very loud, is a very penetrating sound, and may be heard a long way off. During the breeding season the male may often be seen flying round and round in a zigzag course like a snipe, uttering a rapidly repeated call which may be represented by the syllables, '*pĕr-lit*, *pĕr-lit*, *pĕr-lit*,' the accent being on the last syllable.

The food of the Ringed Plover consists of shrimps, small sand-worms, sand-lice, and various small marine creatures. It also catches the insects as they fly about on the sand or rise from the decaying seaweed.

Early in April the large flocks of Ringed Plovers break up, and scattering in small parties choose out nesting sites. They are quite social birds even during the breeding season, and in some localities may be found nesting quite close to each other. The Ringed Plover does not trouble itself much in the construction of its nest, but contents itself with scratching a slight hollow in the sand or gravel, sometimes lining it with tiny pieces of broken shells. In some cases the eggs are deposited in a natural hollow, sometimes in a footprint and occasionally on the bare sand. On the slightest alarm the sitting bird slips quietly off the nest and, running swiftly away, rises at some distance from the nest and is joined by her mate, when the pair will wheel round the intruder uttering their plaintive alarm-note, and trying to draw him away from the vicinity of their treasure. The nest is very difficult to find, as the eggs almost exactly resemble in colour the sand on which they are placed. On two or three occasions, after a long, careful search, I have been at length rewarded by finding the nest within a few inches of some of my previous footprints. Only one brood is reared in the year, though, if the first nest be taken, the birds will generally make another nest not far off.

The eggs laid are usually four in number and are not subject to very much variation in colour. They are pale buff in ground colour, spotted pretty evenly all over with very dark brown and with a few grey undermarkings, though on some specimens the spots are most numerous on the large end of the egg. They are very pyriform in shape as a rule, and vary from 1·6 to 1·3 inch in length, and from 1·0 to ·9 inch in breadth.

Young in down are greyish-brown mottled with dark brown on the upper parts, and have traces of the black-and-white collar round the neck, and the under-parts are white.

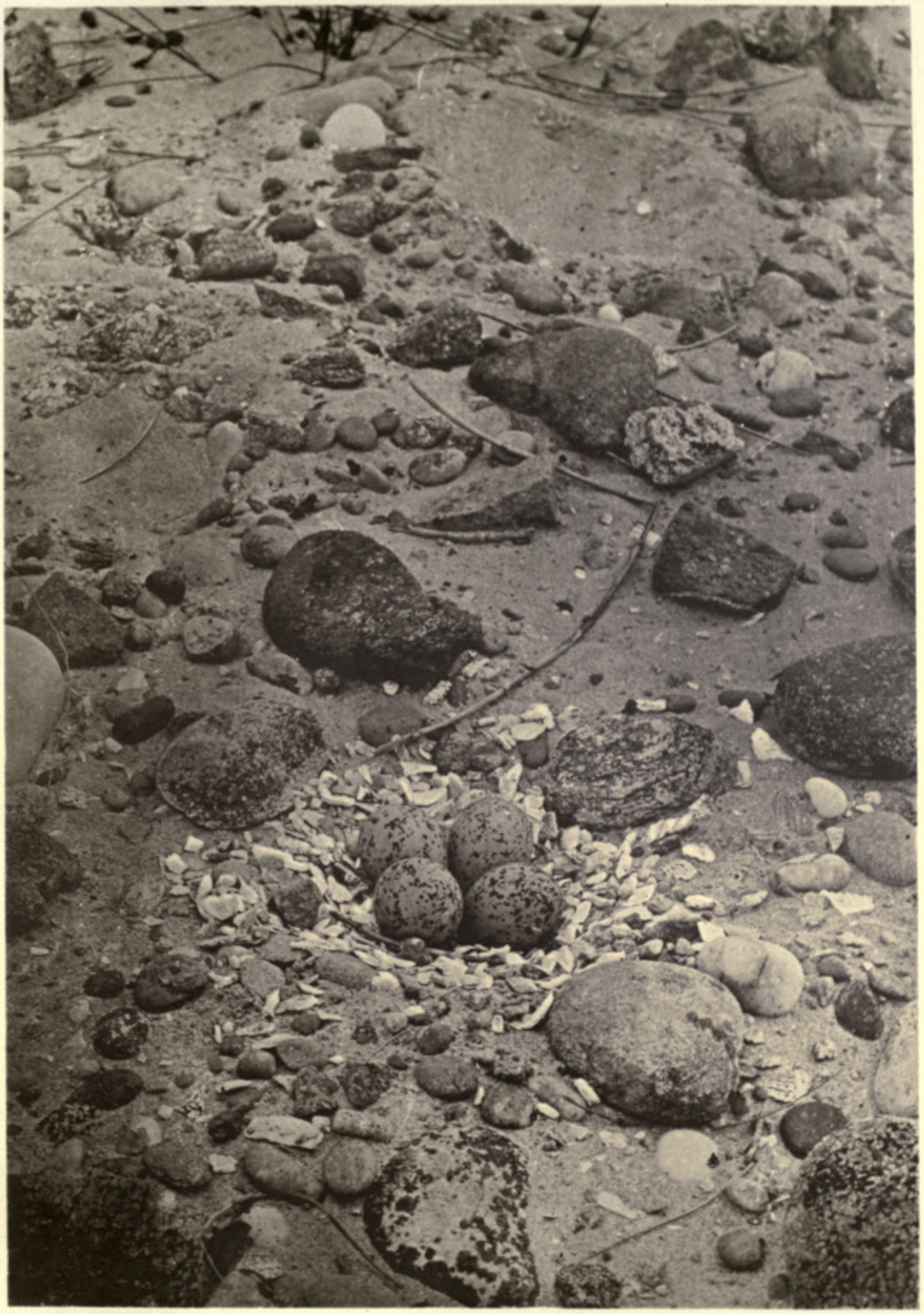
PLATE I

RINGED PLOVER. *Ægialitis hiaticula*

June 19th, 1893.—I found this nest, after a long, weary search, on the Culbin Sands, Morayshire. There were many pairs of birds about, and it was quite useless sitting down to watch them to the nest as there wasn't any cover for hundreds of yards round. I must have been very close to it some time before I found it, as one of my footprints appears in the top of the picture a little higher up the slope than the nest.

This breeding-place was a huge waste of sand, covered with pebbles and small stones scattered about, each one having innumerable little spots of black moss on its upper surface. As these pebbles were mostly quite round and rather the size of the Ringed Plover's eggs, the little black spots made them still more like, and it was very hard to distinguish the real eggs among them. The nests were all lined with little bits of broken shell, quite white, and the eggs were very hard set. A great many pairs of birds were nesting on this stretch of sand. I found seven nests, and there must have been many more as the birds were very numerous, and their plaintive cries resounded on all sides.

It is quite surprising to see how fast these little birds will run as they chase the tiny black flies which infest the sand and bents at this time of year, often stopping quite suddenly and starting off in a fresh direction, always carefully avoiding the larger stones as their tracks in the sand showed.



RINGED PLOVER. *Ægialitis hiaticula.* *Plate I.*

⅔ NATURAL SIZE.

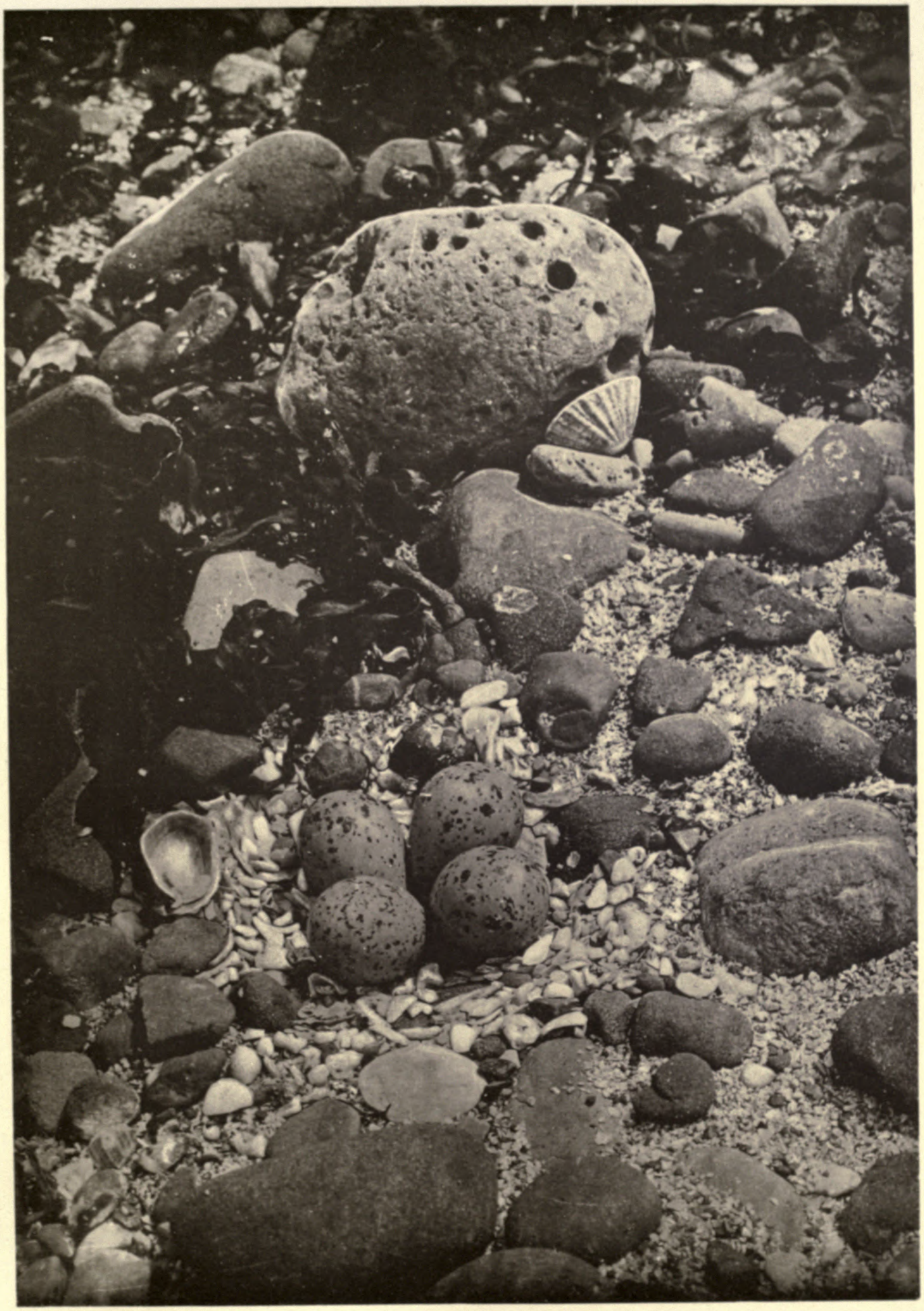
PLATE II

RINGED PLOVER. *Ægialitis hiaticula*

June 10*th*, 1893.—We came across this nest on a gravelly part of the shore on the inner Wide-Opens at the Farnes. It was just about high-water mark on a sloping beach of stones and gravel, among dried seaweed and driftwood.

The little bird was very tame, and ran about within a few yards of us, and we stood about fifteen yards off, and watched her go to the nest after running about for a few minutes; she stood with her wings slightly elevated for a few moments before settling herself upon the eggs. The nest was a mere depression in the gravelly sand, lined with tiny pieces of broken shells and little white pebbles, and the eggs were very nearly the same colour as the surrounding gravel, which made them very hard to detect.

On the same island I saw two tiny little downy young ones, and watched them endeavouring to conceal themselves by crouching beside a stone. The old birds were very anxious all the time I was at the spot, and often ran within a few feet of me, calling plaintively all the time, and sometimes tumbling along on the ground as if wounded. When I stooped down once to pick up one of the young ones, the female actually fell over on her side, and lay kicking with her legs and flapping one wing, but she would not allow me to get closer to her than about five feet. I tried unsuccessfully to get a snap-shot of her in this position.



RINGED PLOVER. *Ægialitis hiaticula.* *Plate II.*

¾ NATURAL SIZE.

LITTLE TERN

Sterna minuta

IN the British Islands the Lesser Tern is not a very common species, nor is it very widely distributed, but in suitable localities along the Scottish coasts its colonies are scattered here and there, and also on some of the adjacent islands, including the Orkneys. In England there are also small scattered colonies of this species, chiefly on the eastern and southern coasts. The Lesser Tern is somewhat local in Wales and also on the Irish coasts, and breeds occasionally on some of our fresh-water lochs.

The favourite haunts of the Lesser Tern are low-lying sandy shores, with occasional beds of fine gravel and broken shells, especially at the mouths of small rivers where there are little islands and pools with banks of fine sand and broken shells. Its movements are very interesting to watch as it flies slowly along above the water, hovering every now and then like some miniature Hawk, and swooping down like an arrow into the water after the small fish which are its staple food. It has rather a slow, jerky manner of flying, and often at the first glance looks like a much larger bird farther away. In its habits it much resembles the Common and Arctic Terns, obtaining most of its food in the same way, dropping down on the tiny fish like a stone, and carrying the struggling captive ashore, or sitting on the water to eat it. It has a curious habit of shaking itself in the air after rising from the water, and very rarely perches on the ground, except at its nest or when sleeping, and does not walk well.

The call-note of the Lesser Tern is the '*krēe*' or '*kēē-rr*' common to most of the Terns, but when its colonies are invaded it has a short, sharp alarm-note, which is constantly repeated, and may be represented on paper by '*wikrr*' or '*yeichk*,' the latter often sounding like a sneeze. It is a noisy

little bird at its colonies, and pairs may often be seen chasing each other some height, calling to each other with a curious cry, something like '*yurr-rrr-rrr-yeichk-yeichk.*' When an intruder appears, the little birds rise straight from their nests and fly round and round, calling incessantly till he leaves the vicinity.

The food of the Lesser Tern is composed principally of tiny fish, sand-eels, and such like fry; but it also eats small crustaceans and marine creatures of various kinds.

The Lesser Tern is rather a late arrival on our shores, seldom appearing at its breeding-haunts before the middle of May, eggs being laid about the end of the month. Its favourite breeding-places are flat beaches, where the sand above high-water mark is covered with broken shells, loose pebbles, and bits of driftwood. It makes very little nest, merely scratching a hollow in the sand for the reception of the eggs, sometimes adding a few bits of broken shell as a lining. Its colonies are not very large, as a rule, only two or three pairs nesting together in many places, but I have come across as many as twenty pairs nesting in one colony, on quite a small patch of sandy gravel on the north coast of Scotland. As is the case with most colonies of Terns, the same site is not chosen every year, and in some seasons Terns are much more plentiful than in others, as when they are subjected to any annoyance or repeated disturbance they very soon leave for more peaceable quarters.

The nests are very difficult to find, as the eggs so closely resemble the colour of the sand on which they are laid. I have walked about for hours looking for the nests with but indifferent success, but, after sitting down a little way off and watching the birds go to their nests, I have repeatedly found the eggs within a few inches of one of my own footprints.

Three is the usual number of eggs laid, though four are occasionally found, in which case it is probable that two females have shared the same nest. The ground colour of the eggs varies from pale buff or stone colour to dark brownish buff, often slightly tinged with olive-green; they are spotted, streaked or blotched with brown of various shades, and with purple-grey under-markings. Some specimens have most of the markings in a zone round the large end of the egg, while on others the underlying marks are the largest and most conspicuous. One variety very closely resembles the eggs of the Ringed Plover, but the shape of the latter prevents confusion. They vary in length from 1·3 to 1·1 inch, and in breadth from 1·0 to ·9 inch.

Young in down are pale buff on the upper parts, mottled with grey on the back, and with black on the head, and have dull white under-parts. They

are very delicate-looking little creatures, with their tiny pink-webbed feet, and are absolutely indistinguishable from the ground when crouching beside some large stone or among the gravel and bits of driftwood. The old birds are very attentive to them, and feed them with half-digested fish, giving them tiny pieces at a time from their bills. On the approach of danger the old birds leave them, trusting, no doubt, to their protective colouring, and fly about in the vicinity, calling anxiously till the danger is past, often betraying their whereabouts by hovering above them. The Lesser Tern does not remain long with us, generally departing for its winter quarters before the end of September.



PLATE I

LITTLE TERN. *Sterna minuta*

June 19th, 1893.—The annexed photograph was taken from a nest in a colony on the north coast of Morayshire. The nests were all placed on one bank of sand covered with small stones, and consisting of low mounds, on the south side of which all the nests were placed. This year there were only five pairs nesting there, but in 1887, when I first came across the colony, there were nineteen pairs of birds, and I find the following entry in my journal for that year:—'On the 8th of June I went along the north shore of the Culbin sands, and on coming round a point a small flock of Lesser Terns rose and came flying round my head, uttering their alarm-notes, "*yeichk-yeichk.*" I counted about forty birds altogether.

'I spent some time walking about and looking for a nest, but without success, as the eggs so closely resemble the gravel on which they are laid that it is almost impossible to detect them even when actually beside the nest. Finding that my chance of getting an egg in that way was small, I withdrew to the back of a sandhill a short distance off and sat down.

'In a very few minutes the little birds came back and began to fly about the beds of gravel where the nests were, sometimes swooping down on them, so that it looked as if they must strike the stones, and at other times hovering like little Kestrels above them. In the course of ten minutes I had marked most of them, and rising slowly to my feet I walked down towards them.

'The Little Terns rose singly and flew quietly away. In a short time I found nineteen nests in little batches of three or four, some of them being within a few inches of my previous footprints. Five of the nests contained three eggs each, five had two, eight had only one egg, and one nest, which I think was the joint-property of two birds, had four eggs in it.'



LITTLE TERN. *Sterna minuta.* *Plate I.*

4/5 NATURAL SIZE.

PLATE II

LITTLE TERN. *Sterna minuta*

June 5th, 1893.—This Plate is taken from a nest which I photographed near the mouth of the Eden, Fifeshire, on a great stretch of fine sand covered with large shells. The coast here is very flat, and there are great expanses of sand which form a perfect paradise for these little birds.

We spent a day looking for the nests along the coast and came upon a small colony of them near an old wreck lying on the beach. There must have been six or seven pairs nesting there, but some of the young birds were hatched, and we only found four nests with eggs, which were all very highly incubated.

The day was fearfully hot and bright, and the glare on the white sand was very trying to the eyes. We sat down in the shade of the old wreck and watched the birds to their nests as well as we could for the clouds of small black flies which covered everything. We saw the Lesser Tern bringing in tiny fish to their young ones among the driftwood and dead seaweed; the fish generally hung down, being held by the back of the head, and was picked to pieces by the little bird and tiny bits given to the young ones. The Lesser Tern is certainly not a good walker, and its movements on the ground are clumsy in the extreme.

When we had marked most of the nests we got up and went to examine them. They were all simply depressions in the sand, without any traces of lining, not even a little bit of broken shell or a small stone, as is usual. It was very hard to get a good photograph of them, as the sun made such a glare on the sand that it reflected back into the lens and fogged the plate before the exposure could be made.



LITTLE TERN. *Sterna minuta.*

Plate II.

4/5 NATURAL SIZE.

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JACKDAW

Corvus monedula

THE Jackdaw is a very common resident, and widely distributed throughout Great Britain and Ireland; it breeds in most districts, on the coasts as well as inland, and is quite as much at home in the busy towns as it is in the ruined castles or rocky heights in the wild glens of the Highlands.

The Jackdaw makes itself at home among very varied surroundings, nesting in the chimneys of our smokiest, busiest towns, among the beams in the spires of cathedrals and churches, in ruined castles and buildings of all sorts, among ivy-covered rocks in glens, or in rabbit-holes on the hill-sides. On the sea-coast it is common wherever there are rocks, even nesting in such isolated situations as the Bass Rock among the Solan Geese and Kittiwakes, where they steal the fish, and even the eggs, of their neighbours the Gulls. They are strictly gregarious birds and live in colonies all the year round, flying to their feeding-grounds in the morning and returning to roost as the shades of evening descend. Their movements are very regular, and they return to roost every evening at the same state of the sun, going through their usual performances in the air every evening before retiring for the night. Every now and then the birds all take wing, wheeling and circling in the air, sometimes chasing each other, and keeping up a chorus of cries as they fight for perches on the trees or rocks, every now and then raising quite an uproar like a lot of people all talking at once, and each one trying to drown his neighbour with his '*keeacko-keack-keack-keeacko-keeacko.*' Occasional bursts of cries startle the echoes long after darkness has set in. The Jackdaw pairs for life, and the two may be seen sitting together at their roosting-places preening each other's feathers, and playfully pecking at each other.

The Jackdaw is much more graceful on the wing than its larger allies, and progresses with rapid beats of its long pointed pinions, sometimes swooping down like a Hawk or darting along just above the trees in a zigzag course.

The food of the Jackdaw consists of worms, grubs, and insects of various kinds, which it obtains in the fields in company with the Rook. It may be seen digging in the turnip-fields for wire-worms or picking up the scattered grain in sowing-time. It also eats acorns and beech-mast in the autumn, and may often be seen on the oak-trees before the acorns have fallen; fruit is also a welcome change in its diet. In the depth of winter, when other food is scarce, it will eat all sorts of garbage and carrion, sometimes accompanying the Hooded Crows in their search for shell-fish on the seashore. The Jackdaw is undoubtedly a sad robber of eggs, preferring the larger-sized ones, such as pigeon's, grouse's, and mallard's, and though at some seasons of the year the Jackdaw is a very useful bird to the farmer, its depredations among the eggs of the game-birds quite entitle it to a place on the gamekeeper's vermin list. I have seen a pair of Jackdaws carry off the whole contents of a Pheasant's nest, though driven away several times, and a Mallard's nest not far distant shared the same fate.

The Jackdaw is a later breeder than the Rook, and does not commence the work of nest-building much before the beginning of April. It will build wherever it can find a suitable hole, and its nest may be found in almost every situation, either in the clefts or crannies in the cliffs, on the sea-coast or inland, in windows and loopholes in the walls of ruined castles, among the ivy that covers them, in the spires of churches, in chimneys, in the disused ventilating-shafts of coal-pits, or in any suitable hole in a tree, and occasionally in rabbit-holes. Even the disused nest of another bird is not despised, and I have seen its nest in the foundation of occupied Heron's nests, or in the huge accumulation of sticks in a fir-tree occupied by Rooks. The size of the nest depends on the peculiarities of the site. In a small hole it may be only a handful of moss, grass, and sheep's wool, but in such situations as a large hollow tree several wheel-barrow loads of sticks are often collected to make a foundation for the nest proper. In Tweedsmuir, where suitable holes were scarce, I found a small colony of Jackdaws nesting in the tops of thick spruce firs in a plantation by the roadside. The nests were huge collections of rubbish,—moss, wool, paper, rags, and sticks of all sizes, and even a few old wooden matchboxes. The nests were not covered over, but were quite open, like the Rook's, two or three being often built close

together, one above the other against the trunk. In large hollow trees as many as seven or eight nests may be found in the same cavity.

From four to six eggs are laid, which vary considerably in size, shape, and in the character of the markings. The ground colour varies from pale bluish green to almost white, spotted and blotched with dark brown and greenish brown markings, and a few faint violet grey under-markings. On some specimens the markings are fairly large, and chiefly on the larger end of the egg, sometimes forming a zone round it; other specimens have the spots small, and distributed pretty evenly over the entire surface; while on some eggs the markings are entirely absent. They vary from 1·5 to 1·3 inch in length, and from 1·1 to ·9 inch in breadth. Very small eggs are occasionally found.

The young birds are tended by their parents long after they have left the nest and can fly, and the old birds may be seen feeding them in the fields, the young birds flapping their wings and '*keeaw*, *keeaw*'-ing in anticipation of some choice morsel.

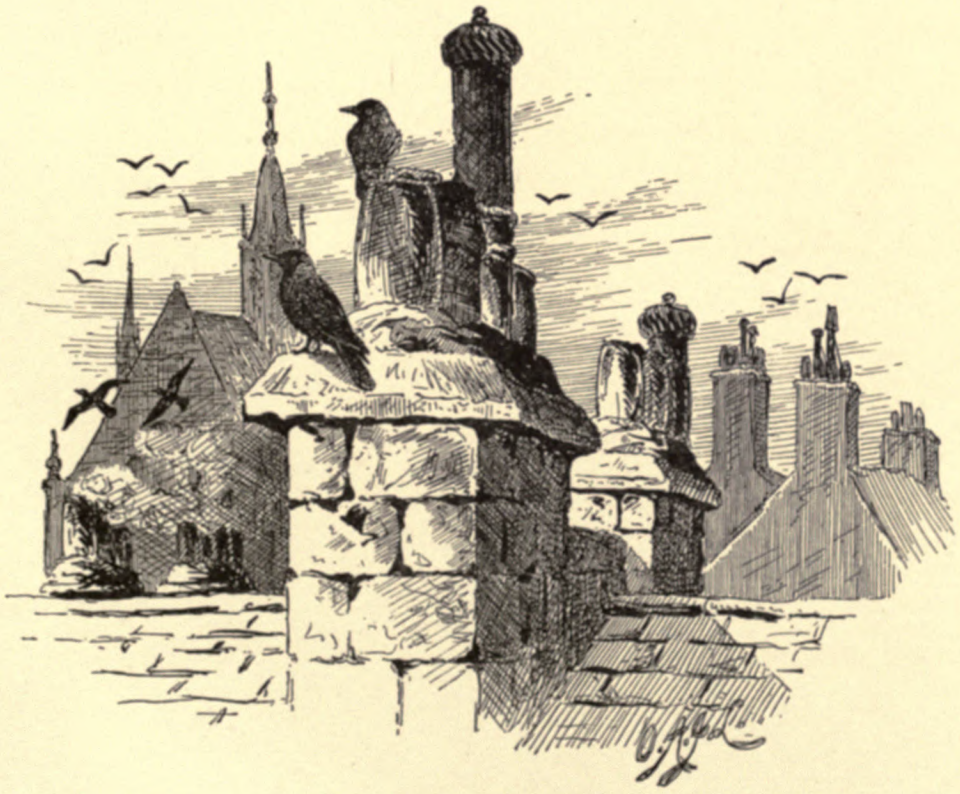


PLATE I

JACKDAW. *Corvus monedula*

April 26th, 1893.—This nest was placed in one of the small windows in the Priory of Inchmahome on the island in the Lake of Monteith. It was a tremendous structure, the foundation being made of ash sticks, and the upper part of the nest of fine sticks, moss, seeds, and dead iris leaves, the whole being lined copiously with sheep's wool and rabbit's fur. The sides of the nest were embellished with pieces of dirty paper. The nest was only about five feet from the ground in one of the vaulted parts of the building and contained five fresh eggs.

All round the Priory are huge old Spanish chestnuts, many of which are quite hollow and contain great numbers of Jackdaw's nests, as many as eleven being in one cavity. The amount of rubbish and sticks collected in some of these holes is enormous. When one old tree was blown down by the gale in 1894 the whole of the hollow trunk, nearly three feet in diameter inside, was filled with a miscellaneous collection of sticks, rags, paper, reeds, and moss, which had been accumulated by the Jackdaws year by year. In one nest in the building I found remains of the picnic parties which had visited the island—several corks, an old torn handkerchief, newspapers, and paper bags, and the handle of a china tea-cup with part of the broken cup attached.

There was a very large colony of Jackdaws on the face of a steep hill overlooking the Lake, but about half a mile distant. Most of the nests were in rabbit-holes, and though nearly a mile from the nearest houses, the collection of rubbish in the nests was most surprising, articles such as a bent iron spoon having been carried to one nest, and a piece of a clay pipe to another.



JACKDAW. *Corvus monedula.*

1/3 NATURAL SIZE.

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